

# Arizona State Retirement System Board



## U.S. Equity Large Cap Manager Review

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Terry A. Dennison, Mercer Investment Consulting

May 20, 2005

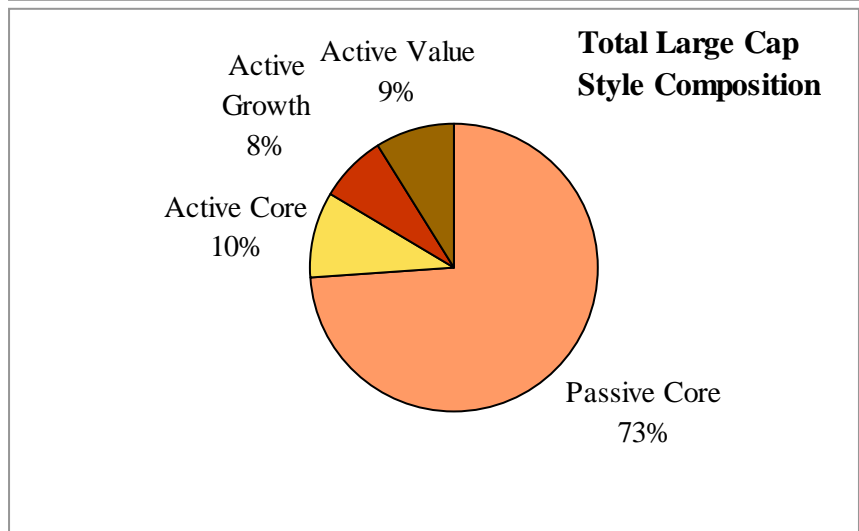
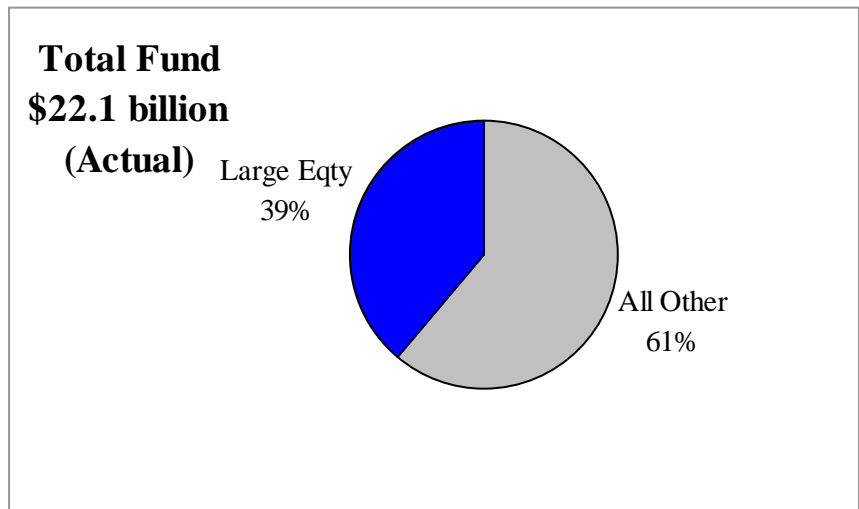
# Presentation Topics

- Large Cap Manager Reviews (aggregate)
  - Asset Class Snapshot
  - Mandates Overview
  - Excess Returns
  - Value Added
  - ASRS Large Cap Composite vs. S&P 500
- Large Cap Manager Reviews (individual)
  - Performance Analysis
  - Attribution Analysis
  - Style Factors
  - Organizational Issues
  - Assessment

# US Equity Large Cap Assets

## March 31, 2005

- Market Value: \$8.6b
- Passive Percent: 77.1%\*
  - Target 75%  $\pm$ 10%
- Active Style Composition-
  - Core: 37%
  - Growth: 29%
  - Value: 34%
- 8 Portfolios
  - 3 Passive
  - 5 Active (Inception: 12/31/02)
    - Quantitative: 3
    - Mathematical: 1
    - Fundamental: 1
- Weighted Average Fee: 7 bp



\*All numbers exclude GTAA, except for the passive percent, in which GTAA is included at the assumed 56% allocation

# Mandates

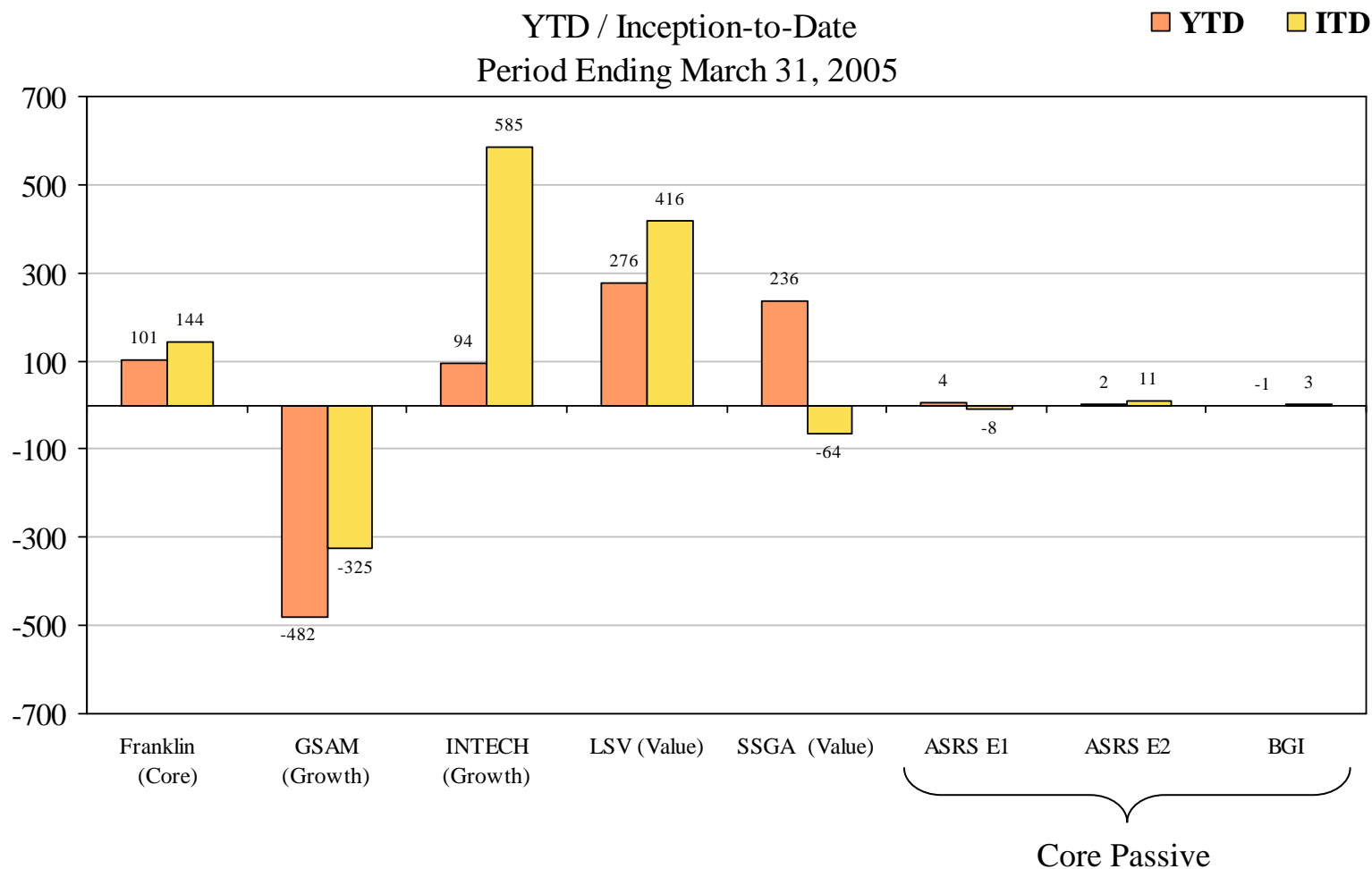
## US Equity Large Cap Managers

Manager	Benchmark	Inception	Fee (bp)	Expected Alpha (bp)	Portfolio Assets (\$mil) <sup>1</sup>	Strategy Assets (\$mil) <sup>1</sup>
<b>Active</b>						
Franklin Portfolio	S&P 500	12/31/02	12	150	\$838.7	\$4,170
Goldman Sachs	S&P 500 GR	12/31/02	41	450	\$312.3	\$7,239
INTECH	S&P 500 GR	12/31/02	43	350	\$336.0	\$14,914
LSV	S&P 500 Val	12/31/02	29	200	\$475.6	\$16,774
State Street	S&P 500 Val	12/31/02	22	200	\$288.3	\$2,187
<b>Passive</b>						
ASRS E1	S&P 500	09/30/95	1	25	\$1,079.2	n/a
ASRS E2	S&P 500	03/31/97	1	5	\$2,930.3	n/a
Barclays Global	S&P 500	07/31/89	1	0	\$2,331.7	\$148,247

<sup>1</sup>As of 03/31/05

# Excess Returns

## US Equity Large Cap Managers

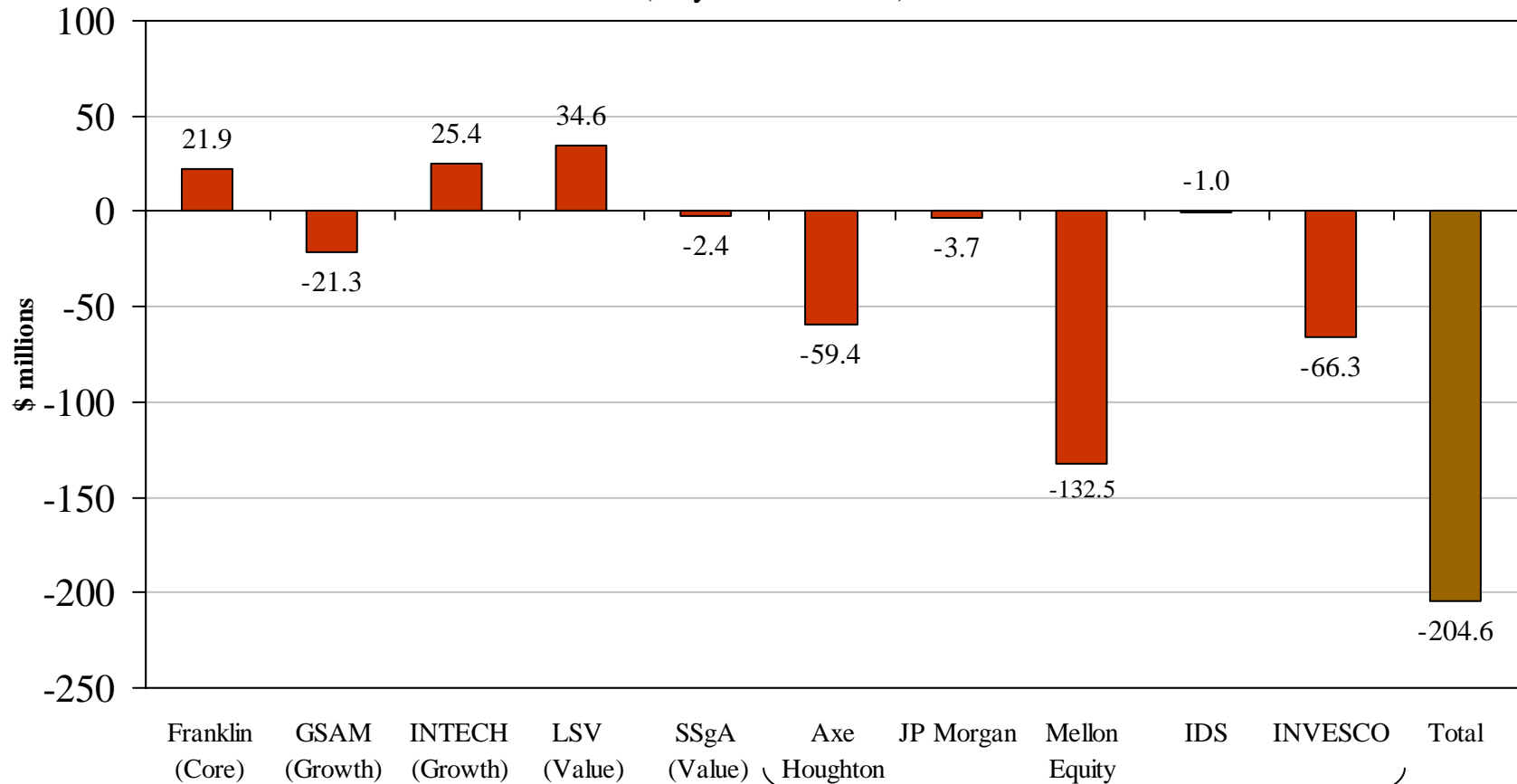


Net of Fees

# Value Added in Dollars

## US Equity Large Cap Active Managers

January 1995 to March 2005  
(10 years 3 months)



Net of Fees

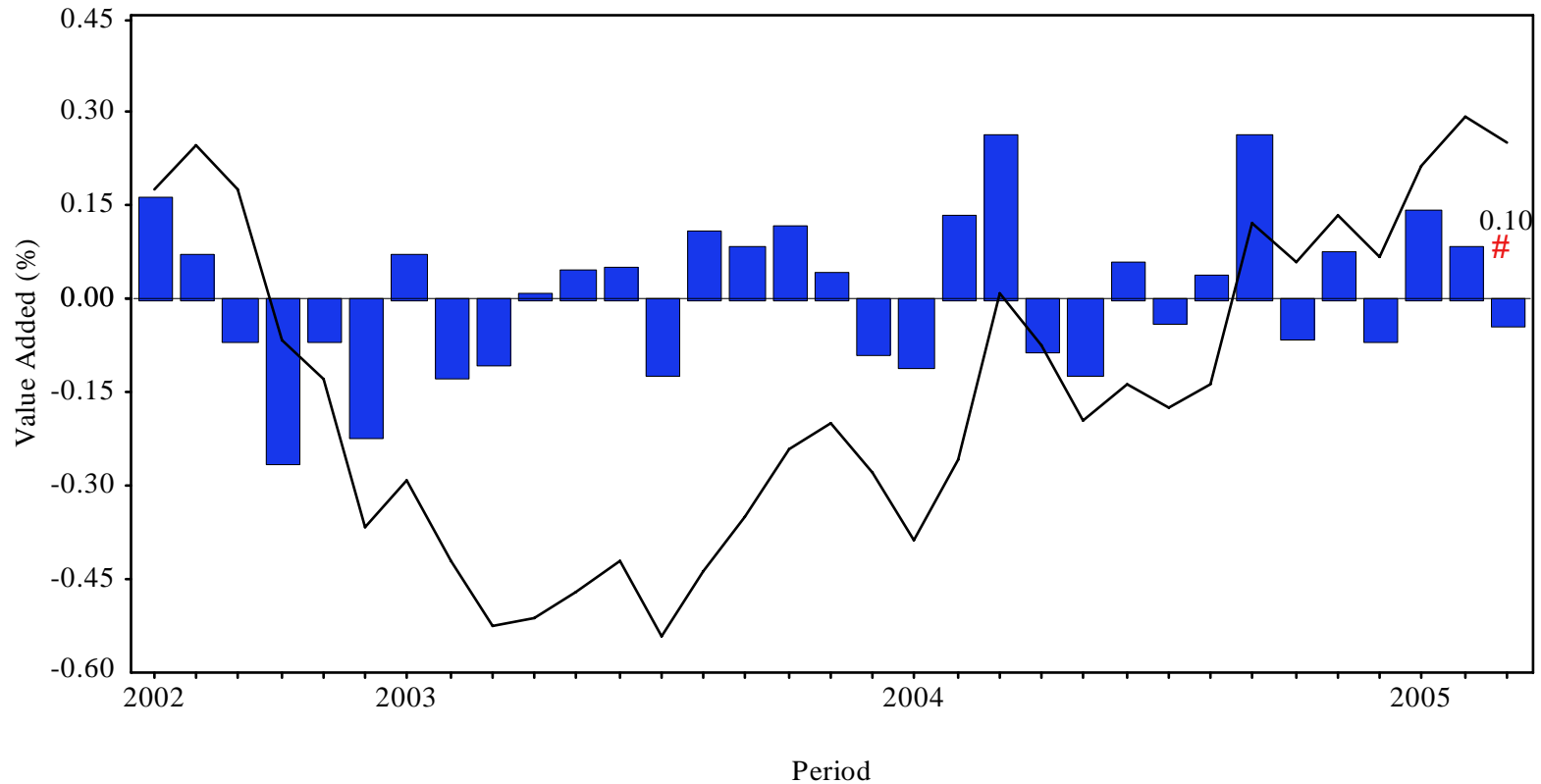
Terminated

Dollar value added is a function of three factors: portfolio size, length of term, and magnitude of excess return.

# US Equity Large Cap Composite

## Value Added Relative to S&P 500

July 2002 to March 2005



Annualized since 7-2002

Cumulative Value Added

Value Added

Market Proxy: S&P 500 INDEX

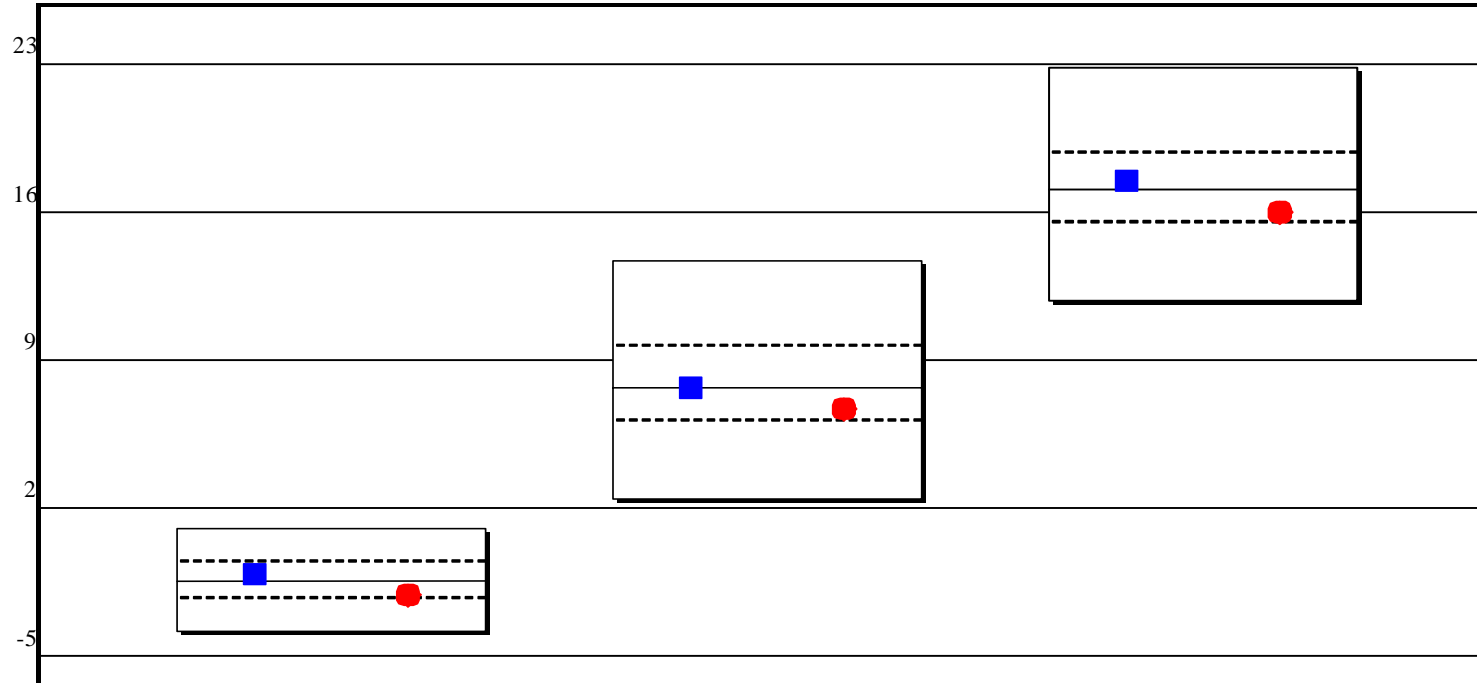
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# Franklin Portfolio Associates

## Comparison with the Mercer US Equity Large Cap Core Universe

### Performance for periods ended March 2005

Rates of Return(%)



1 Quarter (%)

1 Year (%)

Inception (12/31/02)

Franklin LC ■  
S&P 500 ●

-1.1 (36)  
-2.1

7.7 (49)  
6.7

17.4 (43)  
16.0

5th Percentile  
Upper Quartile  
Median  
Lower Quartile  
95th Percentile  
Number of Funds

1.0  
-0.6  
-1.5  
-2.3  
-3.9  
247

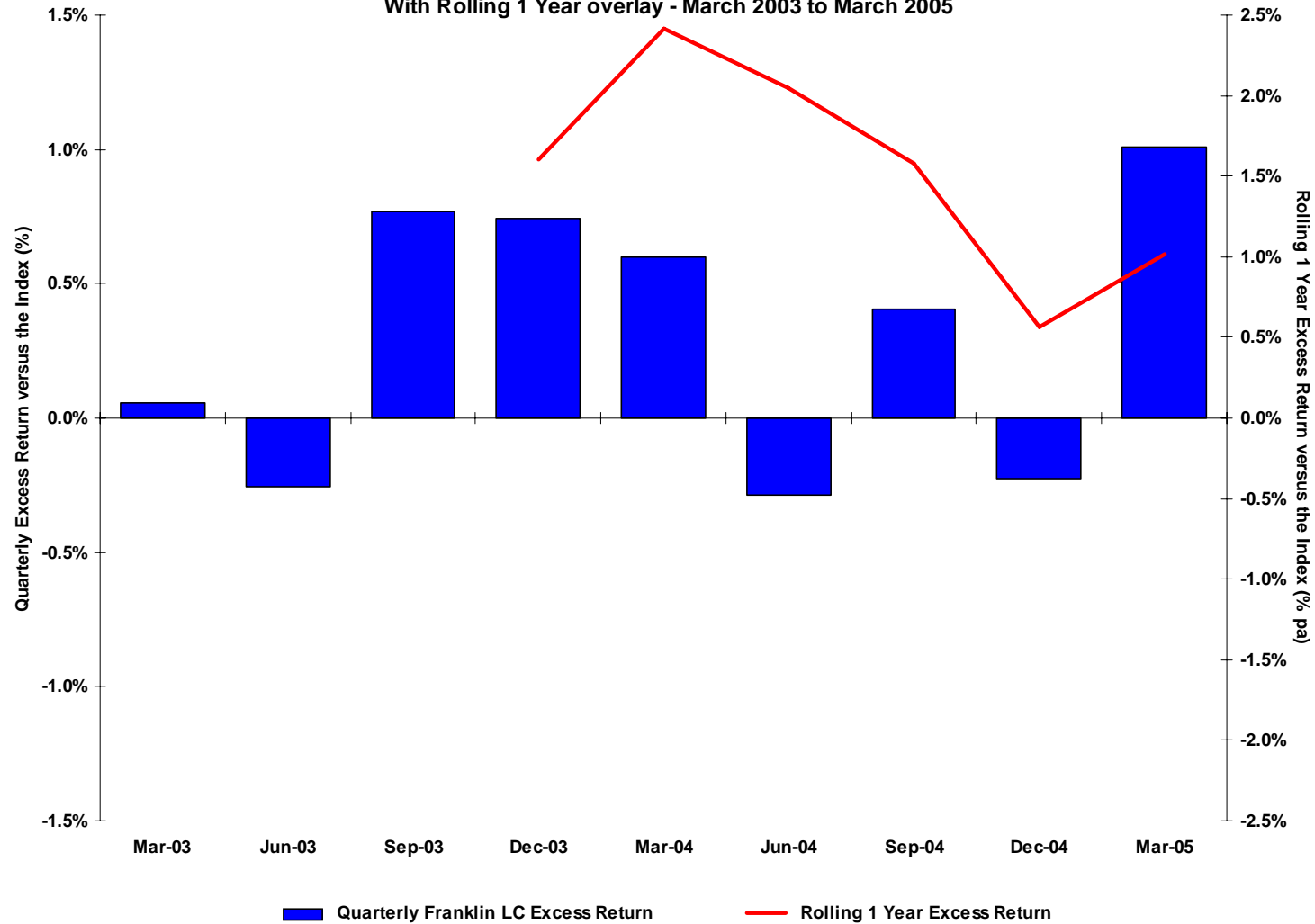
13.7  
9.7  
7.6  
6.1  
2.3  
236

22.8  
18.7  
17.0  
15.5  
11.7  
223



# Franklin Portfolio Associates

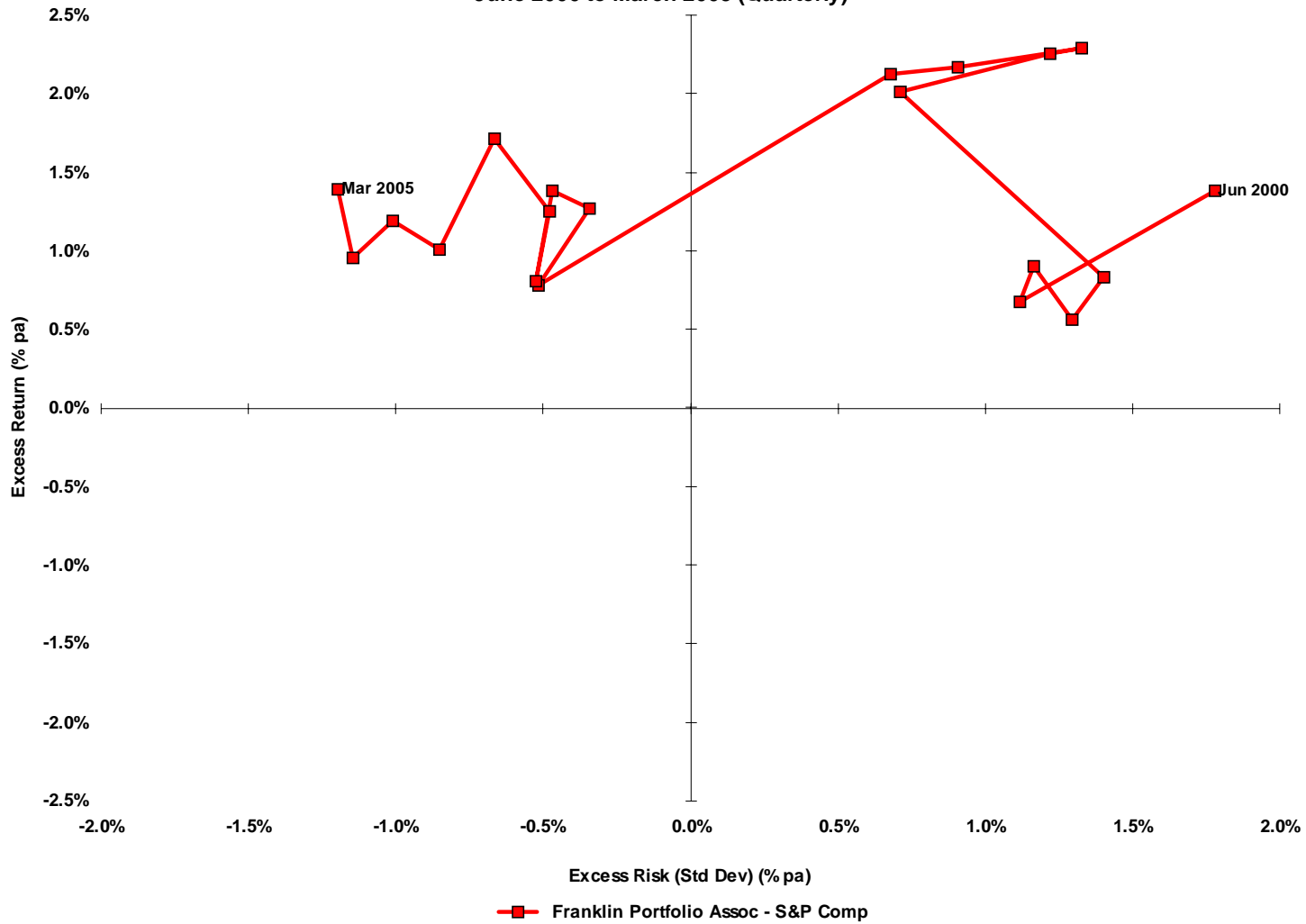
Quarterly Excess Return for Franklin LC versus the S&P 500  
With Rolling 1 Year overlay - March 2003 to March 2005



# Franklin Portfolio Assoc - S&P Comp

Rolling 3 Year Risk / Return versus the S&P 500

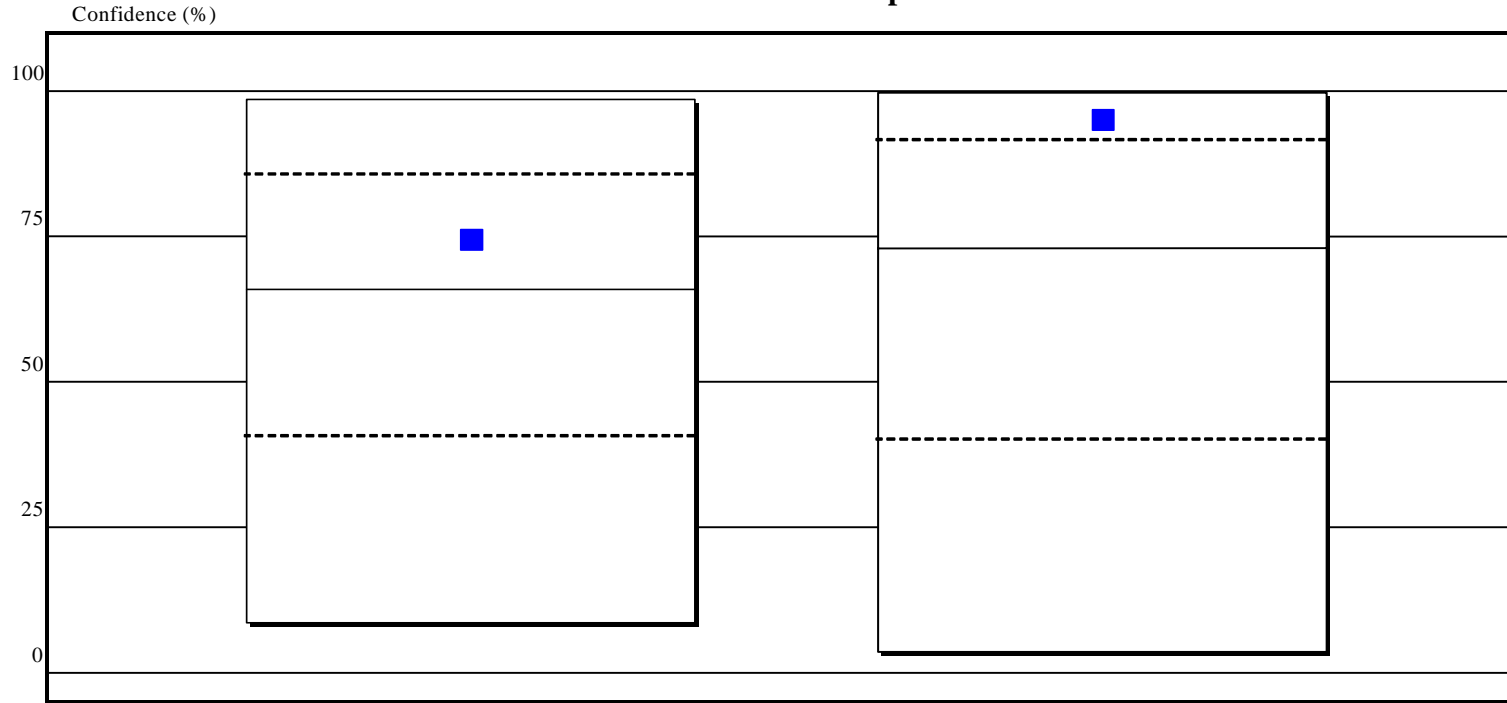
June 2000 to March 2005 (Quarterly)



# Franklin Portfolio Associates

## Comparison with the Mercer US Equity Large Cap Core Universe

### Confidence of Value Added for periods ended March 2005



	1 Year		Inception (12/31/02)	
Franklin LC	74.3	(39)	95.1	(18)
5th Percentile	98.2		99.5	
Upper Quartile	85.5		91.4	
Median	65.8		72.9	
Lower Quartile	40.5		39.9	
95th Percentile	8.2		3.3	
Number of Funds	236		223	

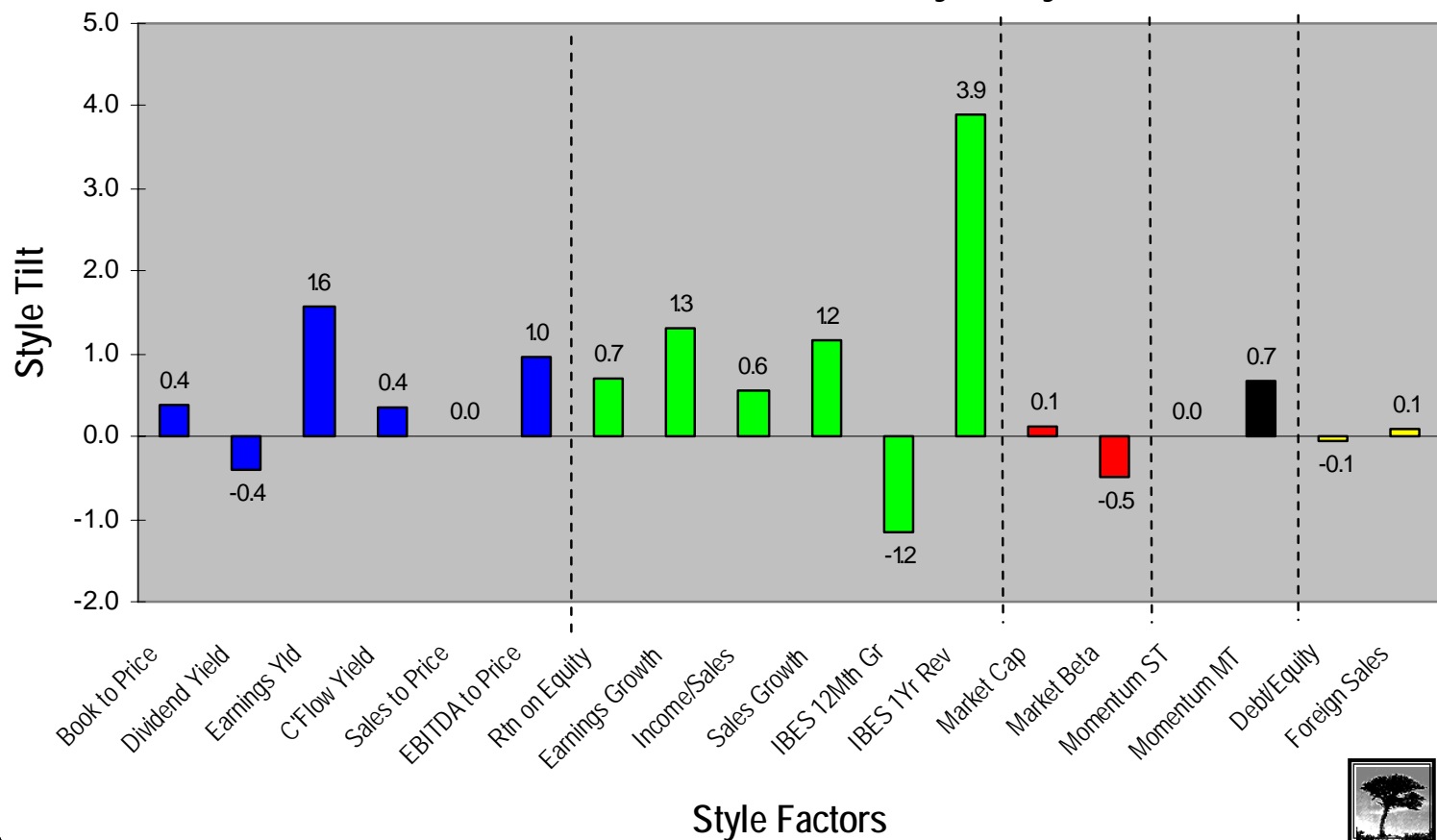
# Franklin Portfolio Associates

## Attribution Analysis

Period Ending March 31, 2005

	<b>Quarter</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>Inception 12/31/02</b>
Stock Selection	0.36	0.52	---	---	0.99
Sector Selection	0.30	-0.25	---	---	0.46
Other	0.38	0.87	---	---	0.11
Fees	-0.03	-0.12	---	---	-0.12
Excess Return	1.01	1.02	---	---	1.44

## Franklin vs S&P 500 - Portfolio Style Skyline



# Franklin Portfolio Associates

## Organizational Issues

- No organization concerns at this time.

# Franklin Portfolio Associates Assessment

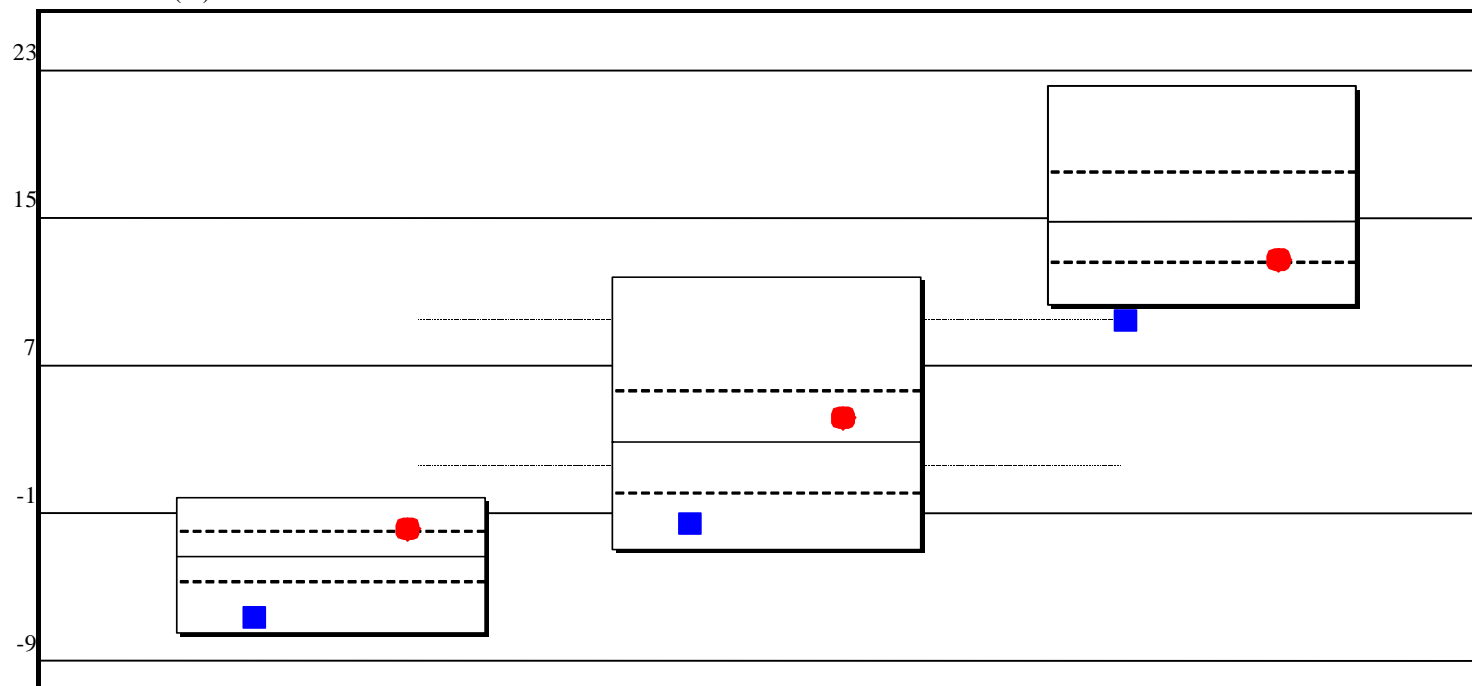
- Franklin outperformed its benchmark and placed above the universe median for all periods evaluated.
- Mercer rates this product A (above average probability of outperformance).

# Goldman Sachs Asset Management

## Comparison with the Mercer US Equity Large Cap Growth Universe

### Performance for periods ended March 2005

Rates of Return(%)



1 Quarter (%)

1 Year (%)

Inception (12/31/02)

Goldman  
S&PGRO

-6.7 (91)  
-1.9

-1.6 (90)  
4.1

9.5 (96)  
12.7

5th Percentile  
Upper Quartile  
Median  
Lower Quartile  
95th Percentile  
Number of Funds

-0.2  
-2.1  
-3.4  
-4.8  
-7.6  
263

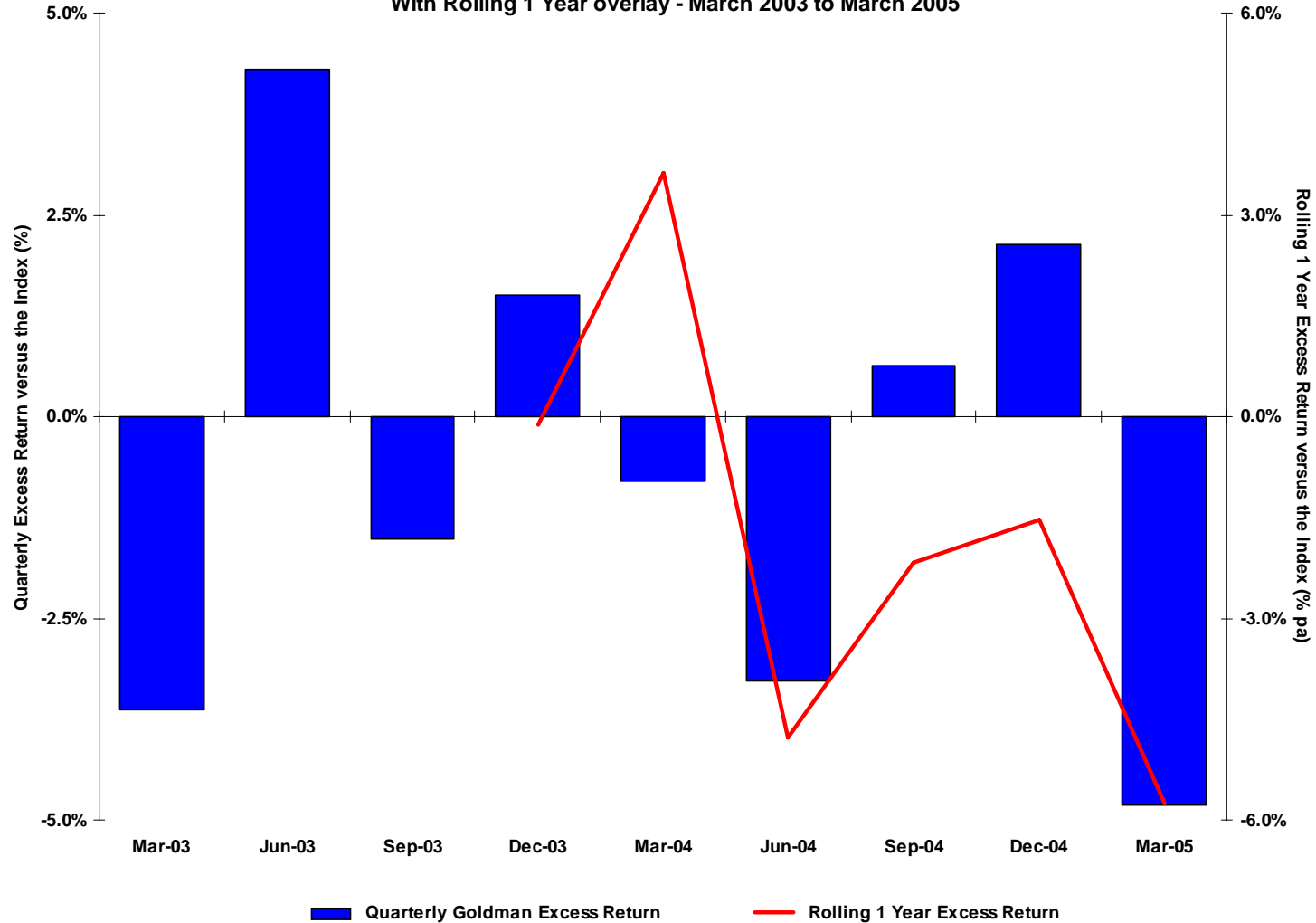
11.8  
5.6  
2.8  
-0.1  
-3.0  
255

22.1  
17.4  
14.8  
12.5  
10.3  
248



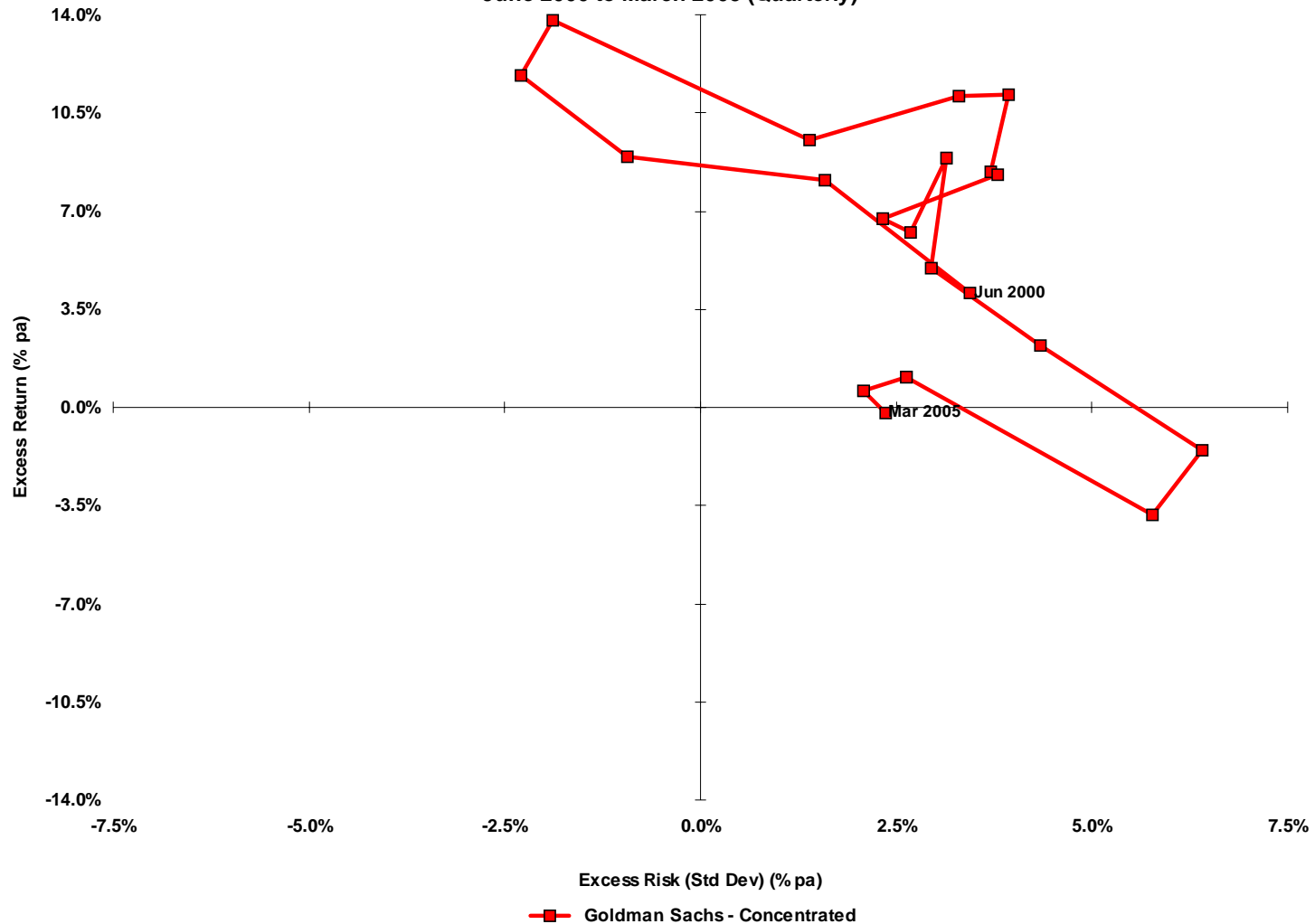
# Goldman Sachs Asset Management

Quarterly Excess Return for Goldman versus the S&P 500/BARRA Growth  
With Rolling 1 Year overlay - March 2003 to March 2005



# Goldman Sachs - Concentrated

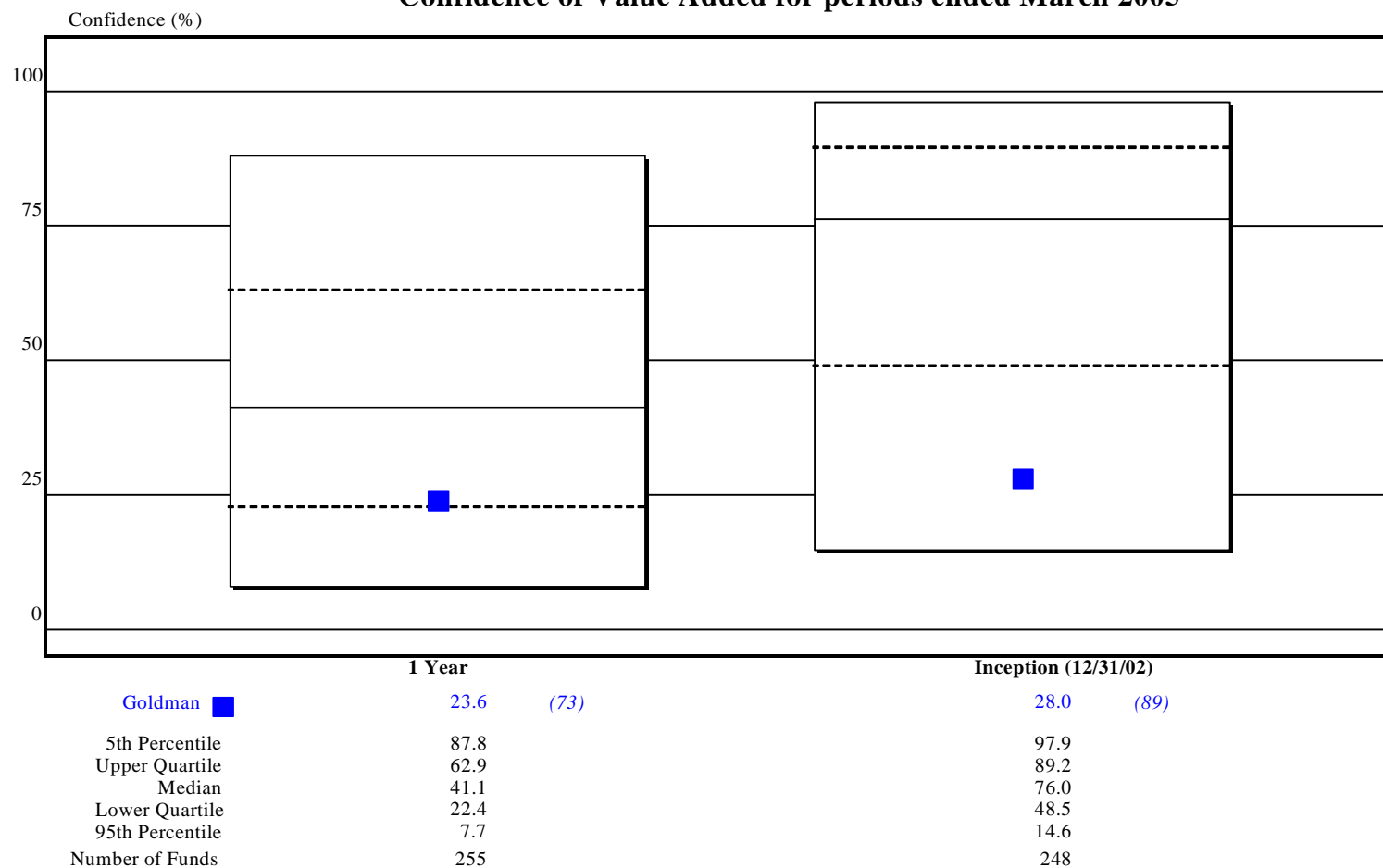
Rolling 3 Year Risk / Return versus the S&P 500/BARRA Growth  
June 2000 to March 2005 (Quarterly)



# Goldman Sachs Asset Management

## Comparison with the Mercer US Equity Large Cap Growth Universe

### Confidence of Value Added for periods ended March 2005



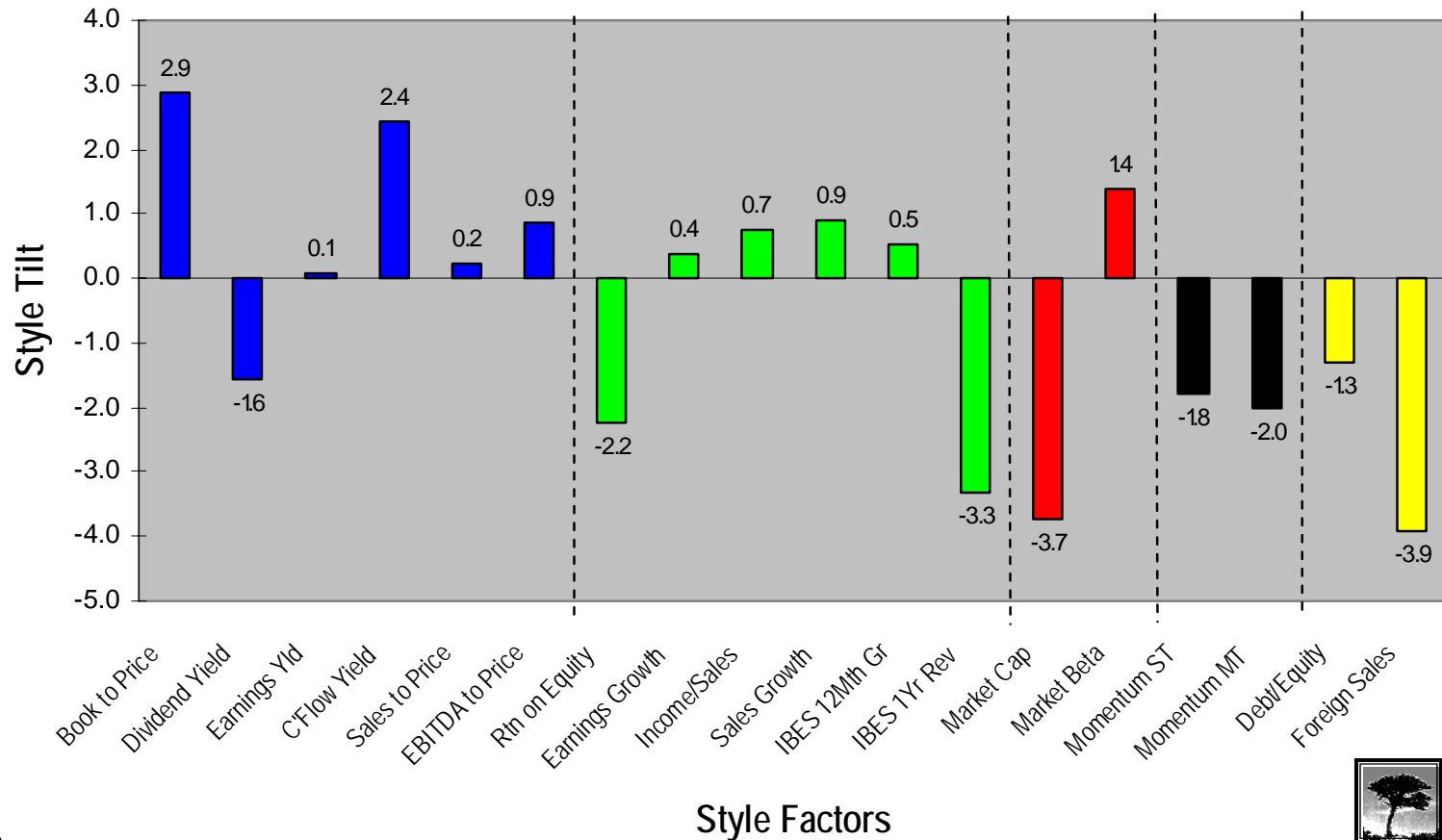
# Goldman Sachs

## Attribution Analysis

Period Ending March 31, 2005

	<b>Quarter</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>Inception 12/31/02</b>
Stock Selection	-1.21	1.98	---	---	0.83
Sector Selection	-3.51	-7.32	---	---	-3.67
Other	0.00	0.00	---	---	0.00
Fees	-0.10	-0.41	---	---	-0.41
Excess Return	-4.82	-5.75	---	---	-3.25

## Goldman Sachs vs S&P Growth - Portfolio Style Skyline



# Goldman Sachs Asset Management

## Organizational Issues

- No organization concerns at this time.

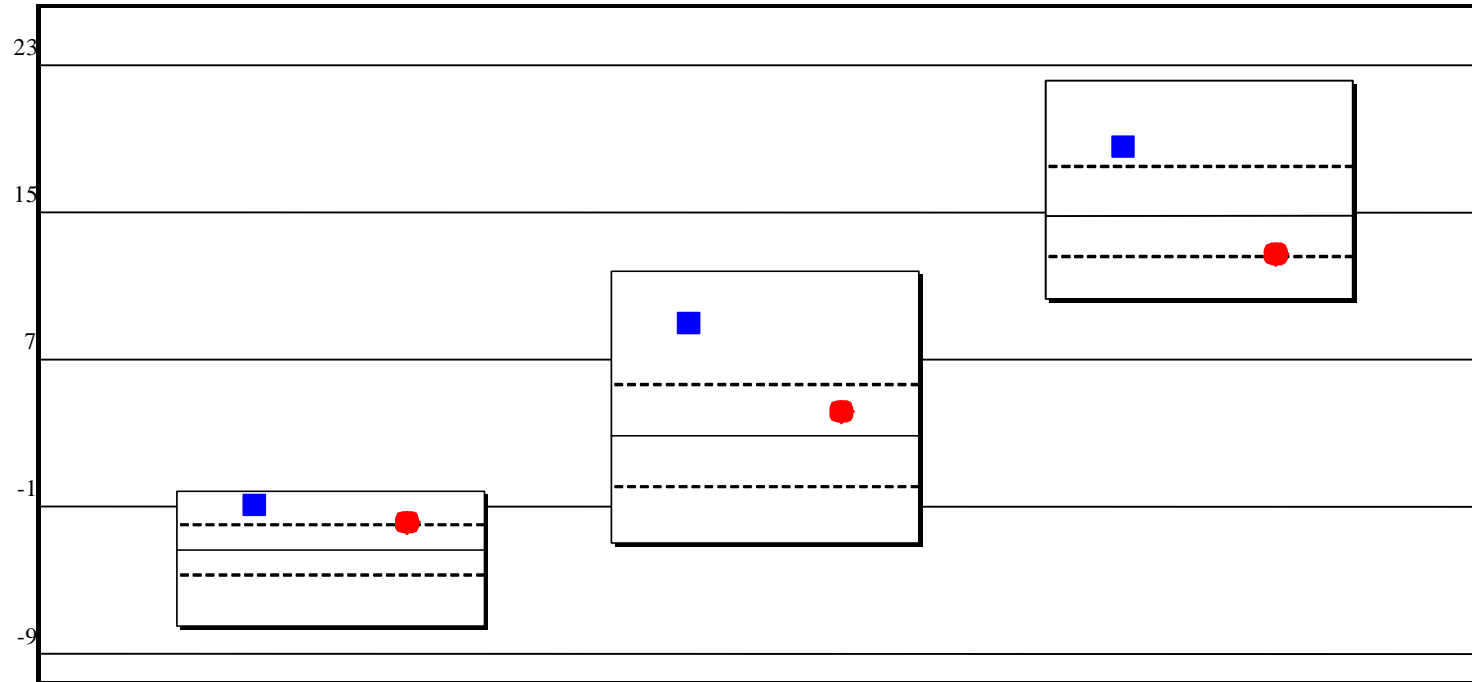
# Goldman Sachs Asset Management Assessment

- Goldman Sachs underperformed its benchmark and placed in the bottom decile of the universe for all periods evaluated.
- Mercer rates this product A (above average probability of outperformance).

# INTECH

## Comparison with the Mercer US Equity Large Cap Growth Universe Performance for periods ended March 2005

Rates of Return(%)

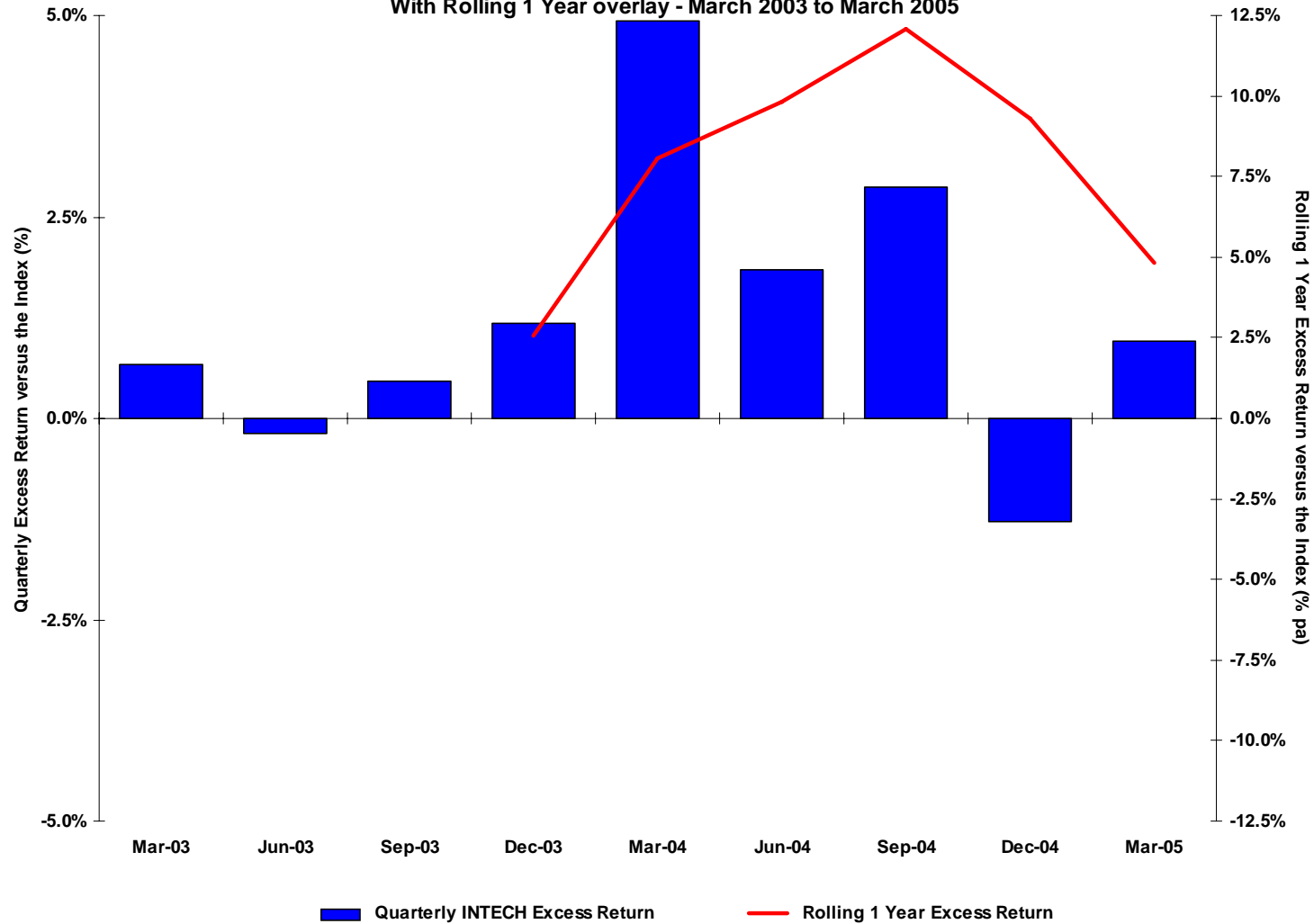


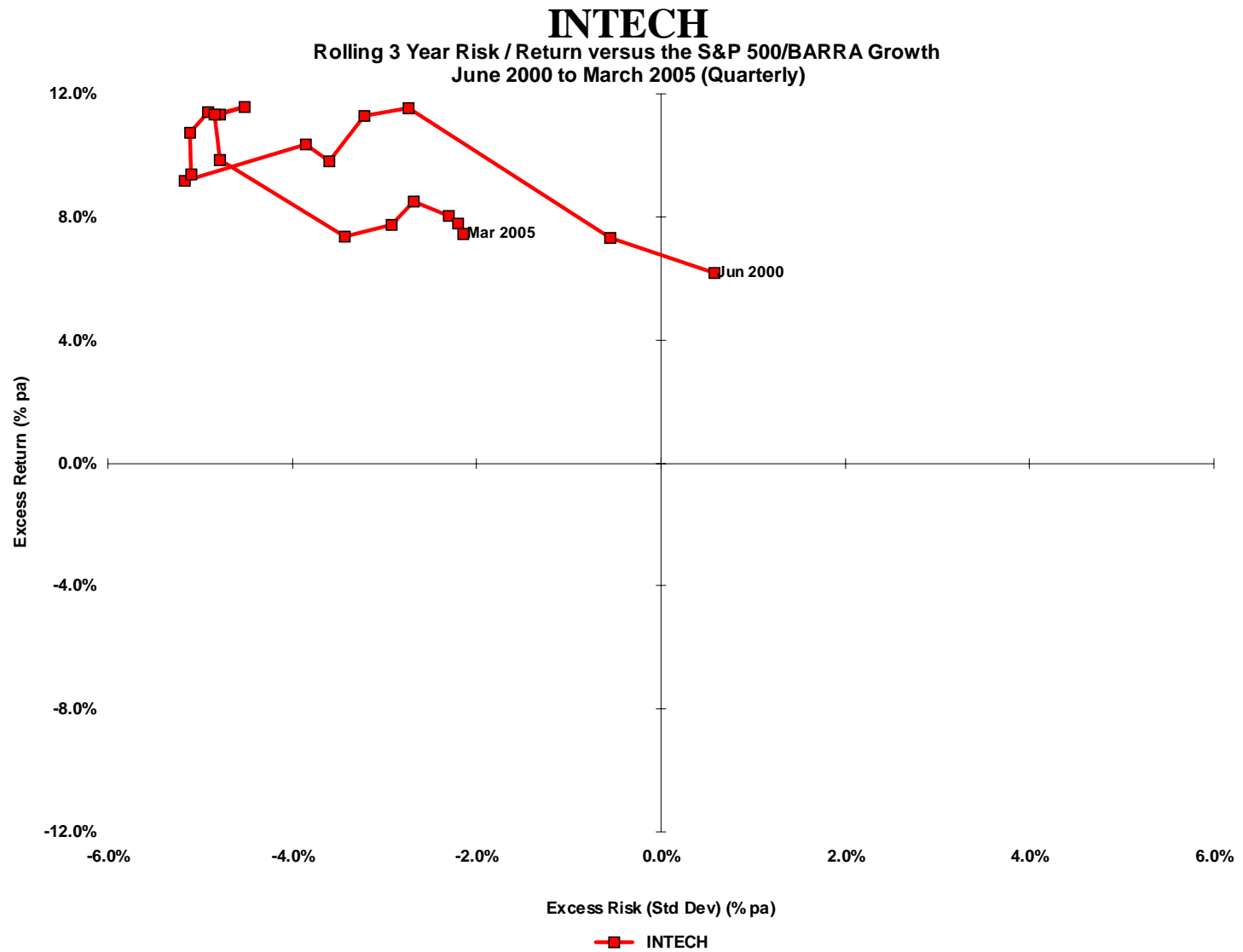
INTECH	12	9.0	18.6
S&PGRO	12	4.1	12.7
5th Percentile	-0.2	11.8	22.1
Upper Quartile	-2.1	5.6	17.4
Median	-3.4	2.8	14.8
Lower Quartile	-4.8	-0.1	12.5
95th Percentile	-7.6	-3.0	10.3
Number of Funds	263	255	248



# INTECH

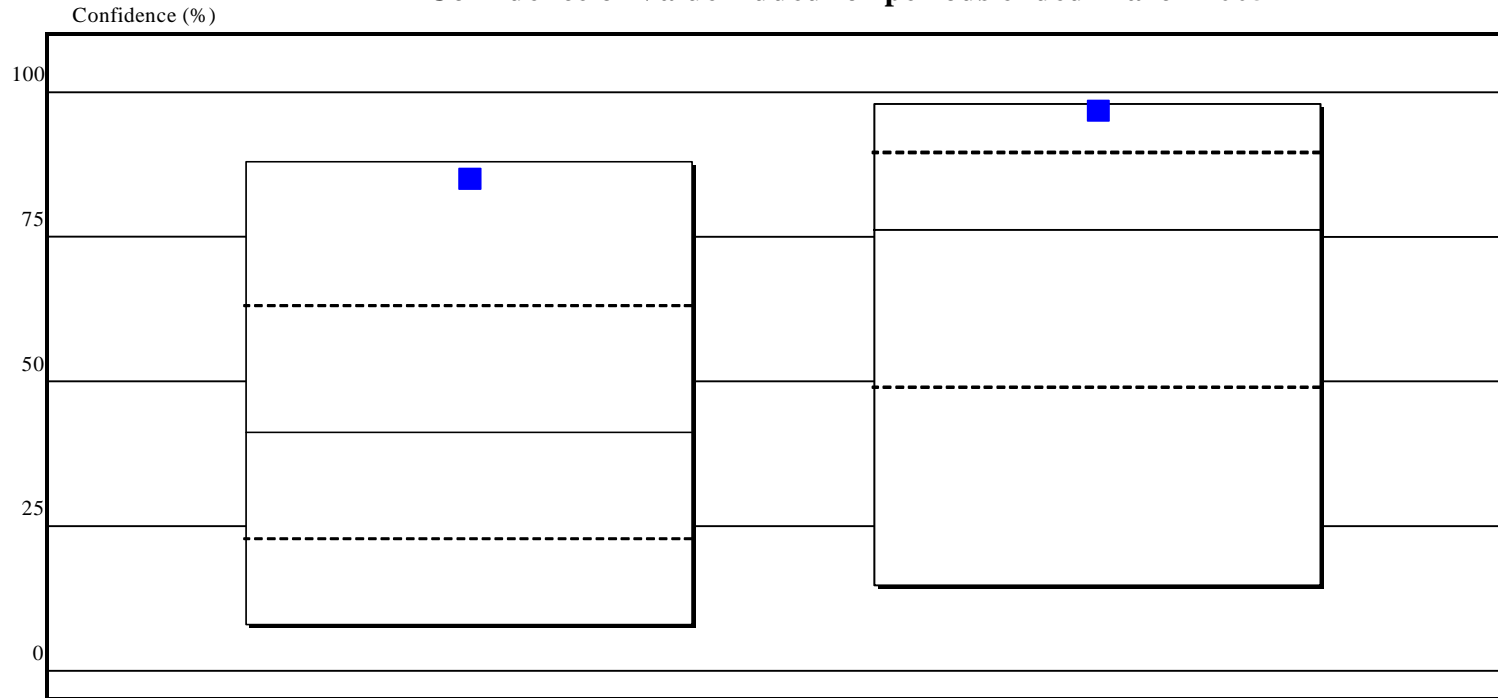
Quarterly Excess Return for INTECH versus the S&P 500/BARRA Growth  
With Rolling 1 Year overlay - March 2003 to March 2005





# INTECH

## Comparison with the Mercer US Equity Large Cap Growth Universe Confidence of Value Added for periods ended March 2005



	1 Year		Inception (12/31/02)	
INTECH	84.9	(8)	96.6	(9)
5th Percentile	87.8		97.9	
Upper Quartile	62.9		89.2	
Median	41.1		76.0	
Lower Quartile	22.4		48.5	
95th Percentile	7.7		14.6	
Number of Funds	255		248	

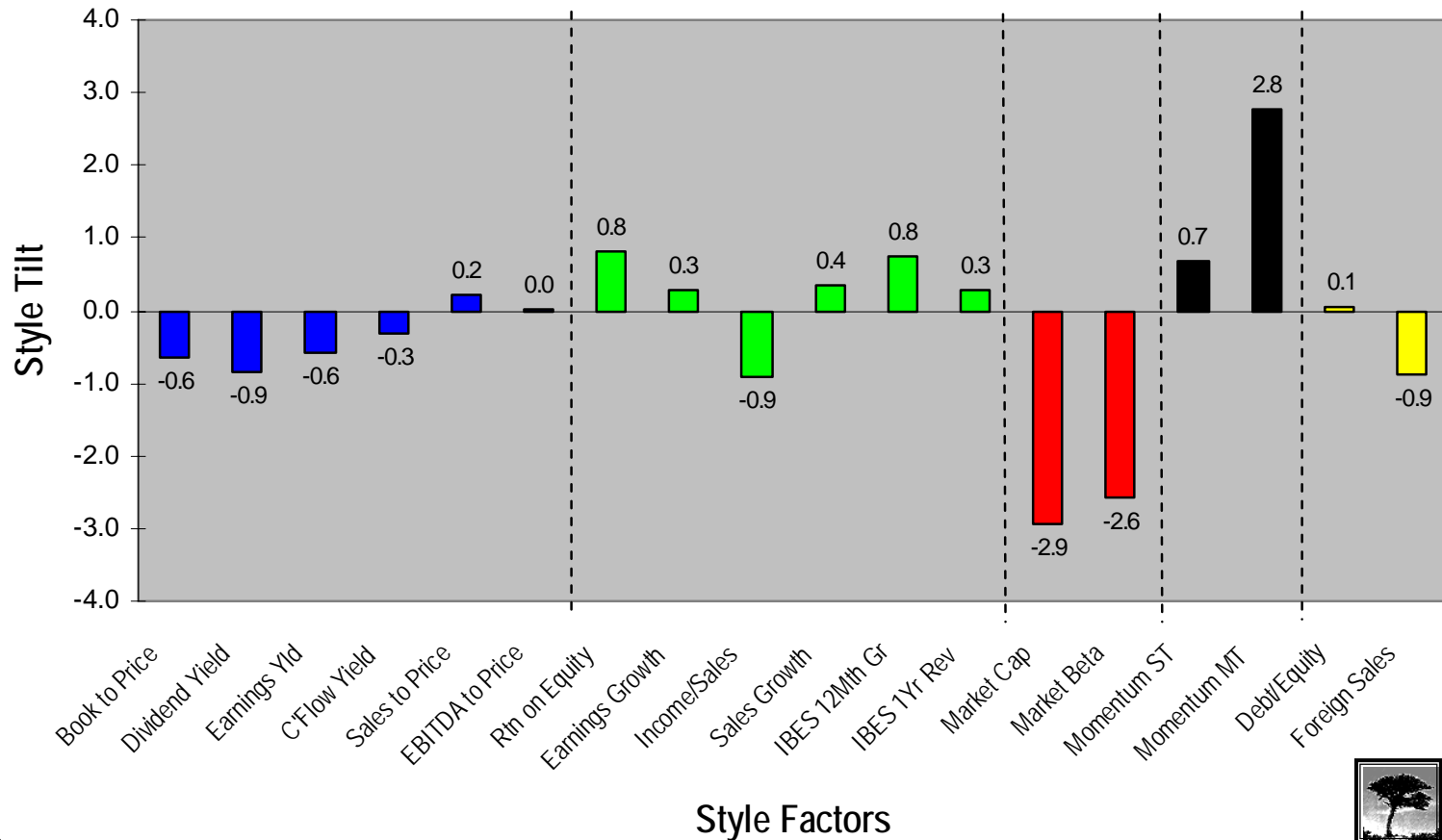
# INTECH

## Attribution Analysis

Period Ending March 31, 2005

	Quarter	1 Year	3 Years	5 Years	Inception 12/31/02
Change in Diversity (size effect)	1.24	4.71	---	---	5.20
Alpha Generator	-0.19	0.54	---	---	1.08
Other	0.00	0.00	---	---	0.00
Fees	-0.11	-0.43	---	---	-0.43
Excess Return	0.94	4.82	---	---	5.85

## INTECH vs S&P Growth - Portfolio Style Skyline



# INTECH

## Organizational Issues

- No organization concerns at this time.

# INTECH

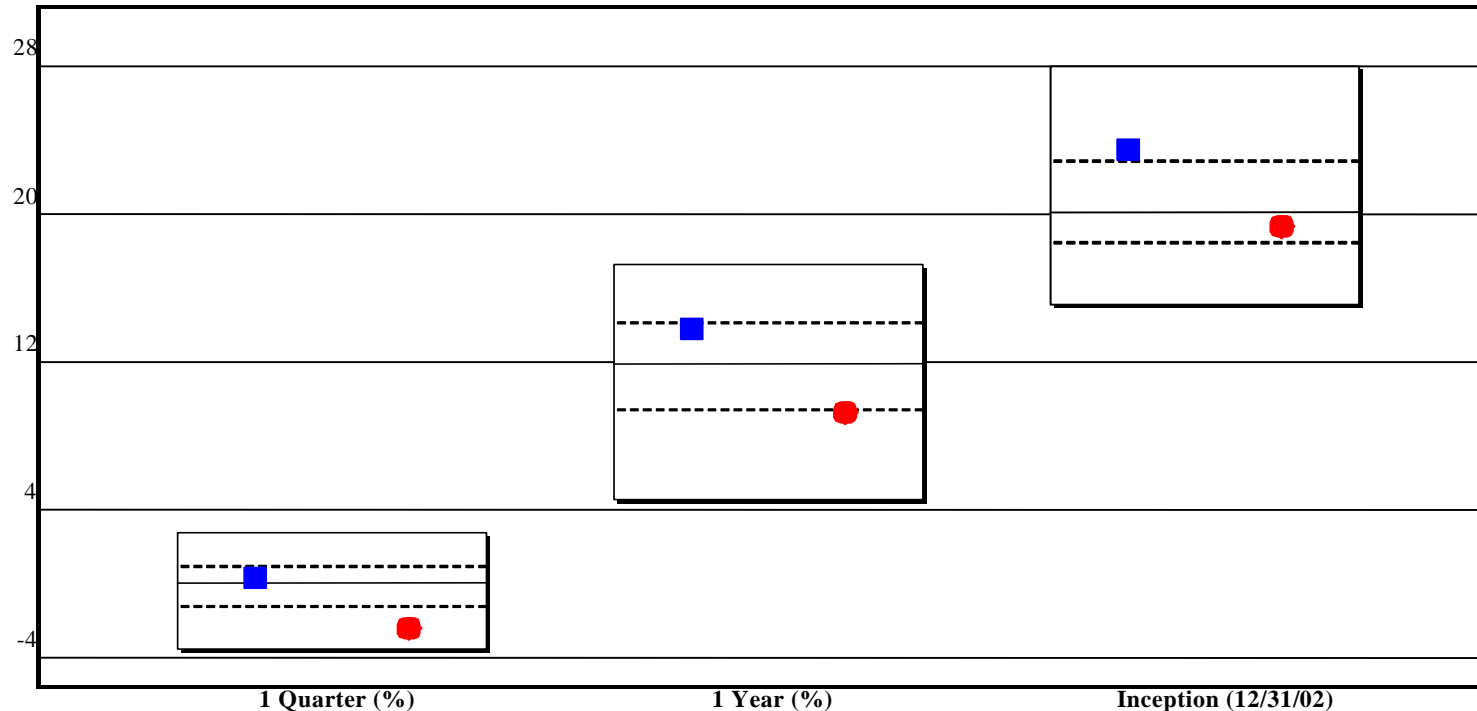
## Assessment

- INTECH outperformed its benchmark and placed in the top quartile of the universe for all periods evaluated.
- Mercer rates this product A (above average probability of outperformance).

# LSV Asset Management

Comparison with the Mercer US Equity Large Cap Value Universe  
Performance for periods ended March 2005

Rates of Return(%)

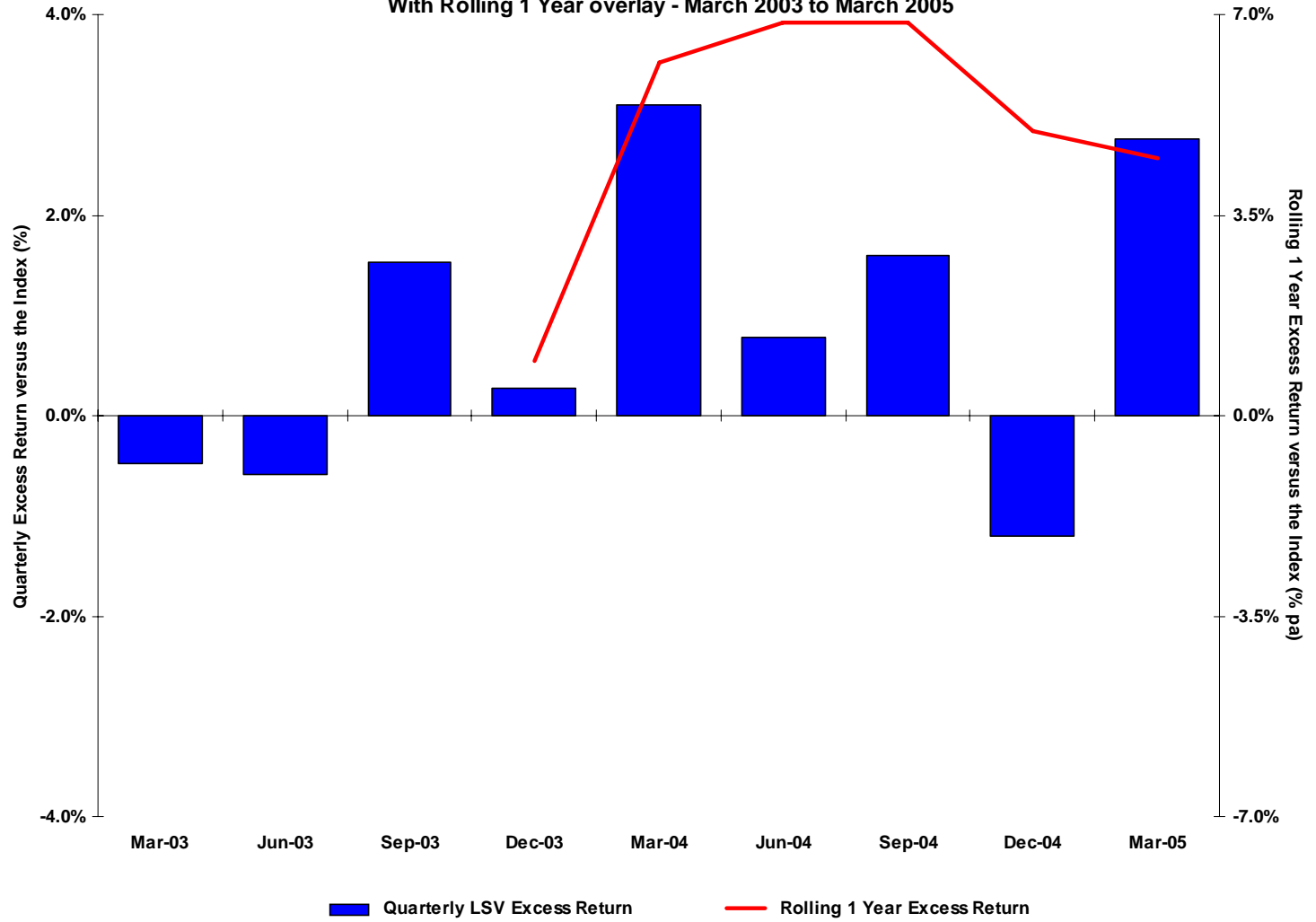


LSV	0.3	(39)	13.7	(28)	23.5	(20)
S&P Val	-2.4		9.2		19.3	
5th Percentile	2.7		17.2		28.0	
Upper Quartile	0.8		14.0		22.8	
Median	0.0		11.8		20.0	
Lower Quartile	-1.3		9.3		18.4	
95th Percentile	-3.6		4.5		15.0	
Number of Funds	282		274		263	



# LSV Asset Management

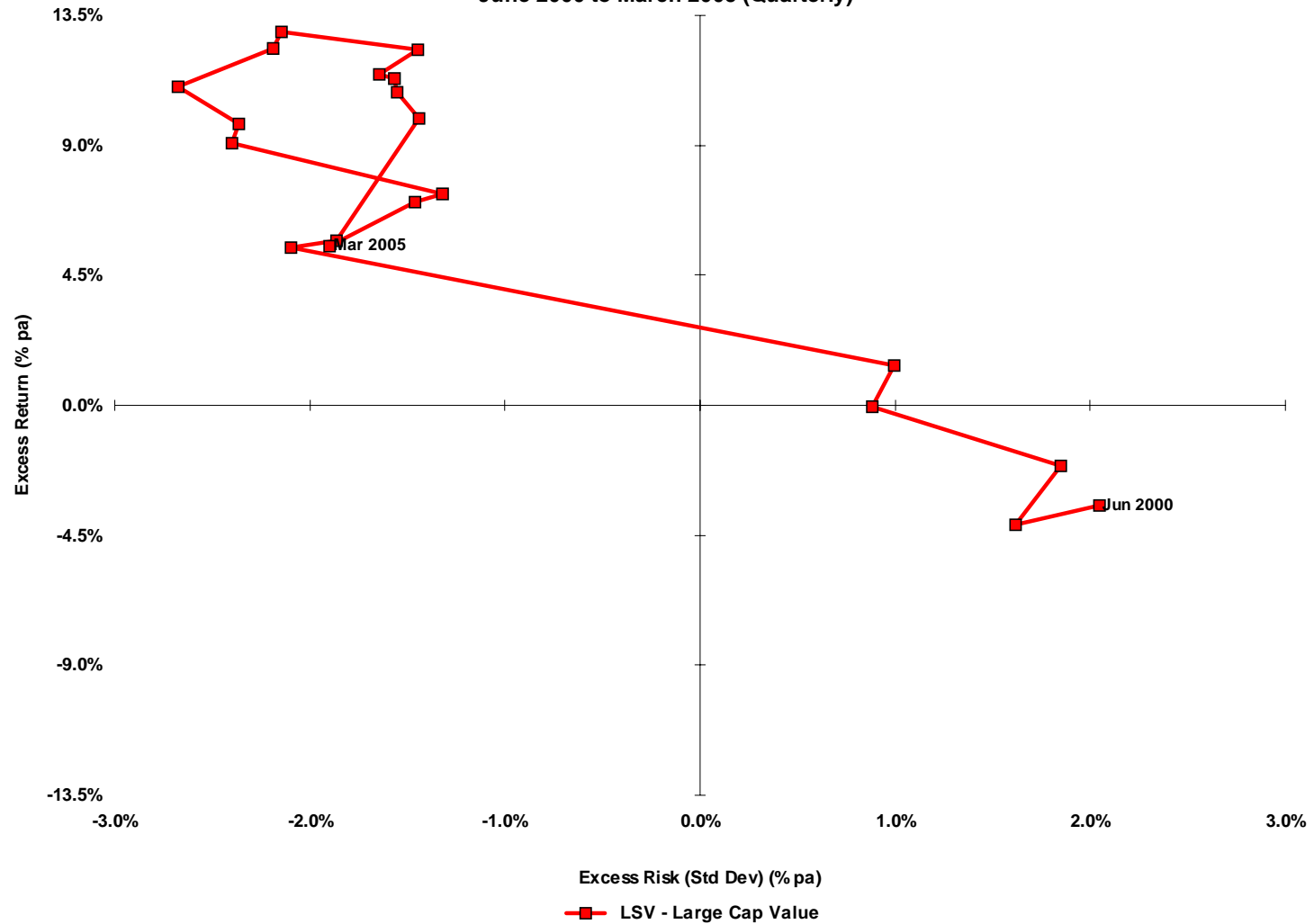
Quarterly Excess Return for LSV versus the S&P 500/BARRA Value  
With Rolling 1 Year overlay - March 2003 to March 2005



## LSV - Large Cap Value

June 2000 to March 2005 (Quarterly)

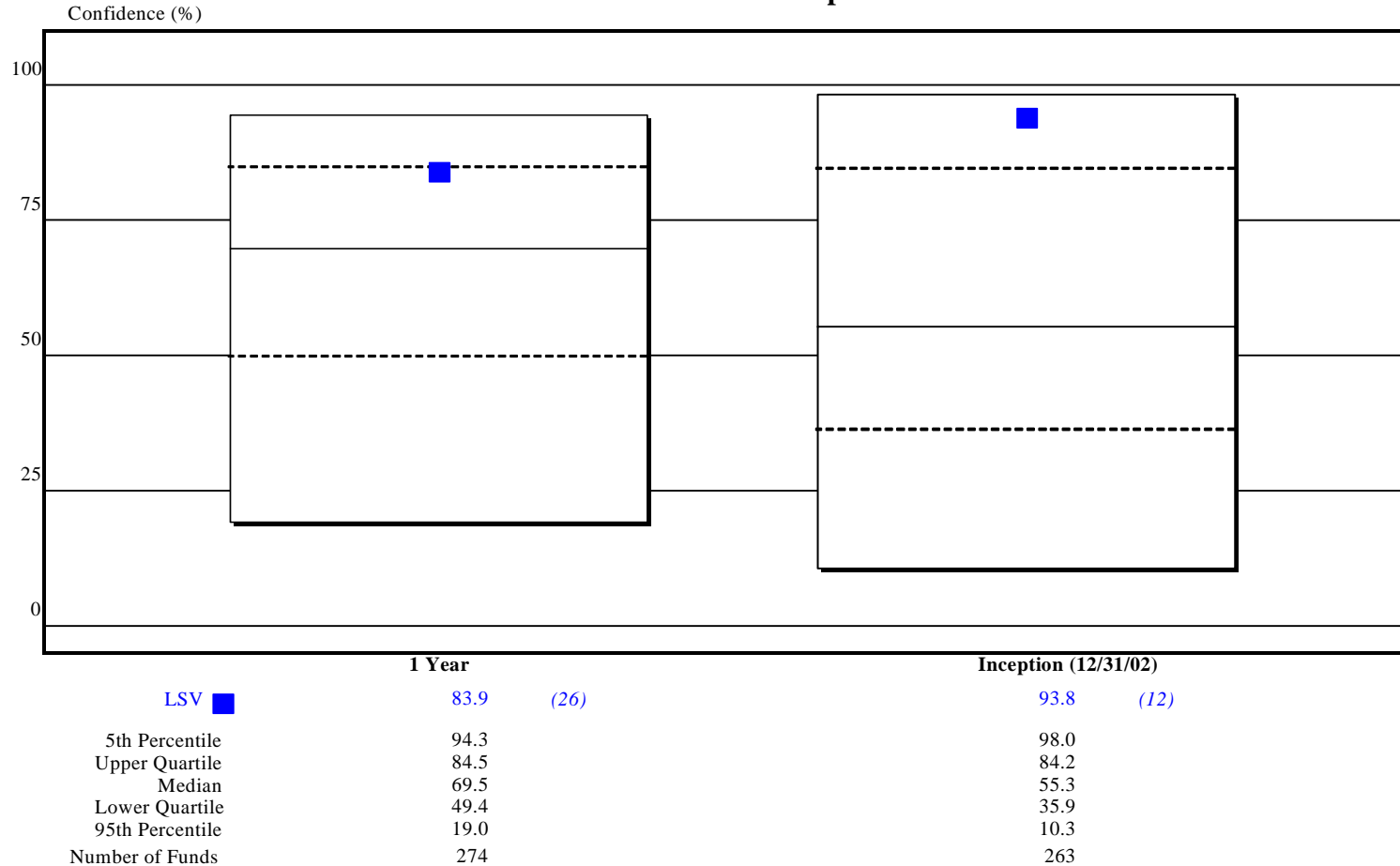
### June 2000 to March 2005 (Quarterly)



# LSV Asset Management

## Comparison with the Mercer US Equity Large Cap Value Universe

### Confidence of Value Added for periods ended March 2005



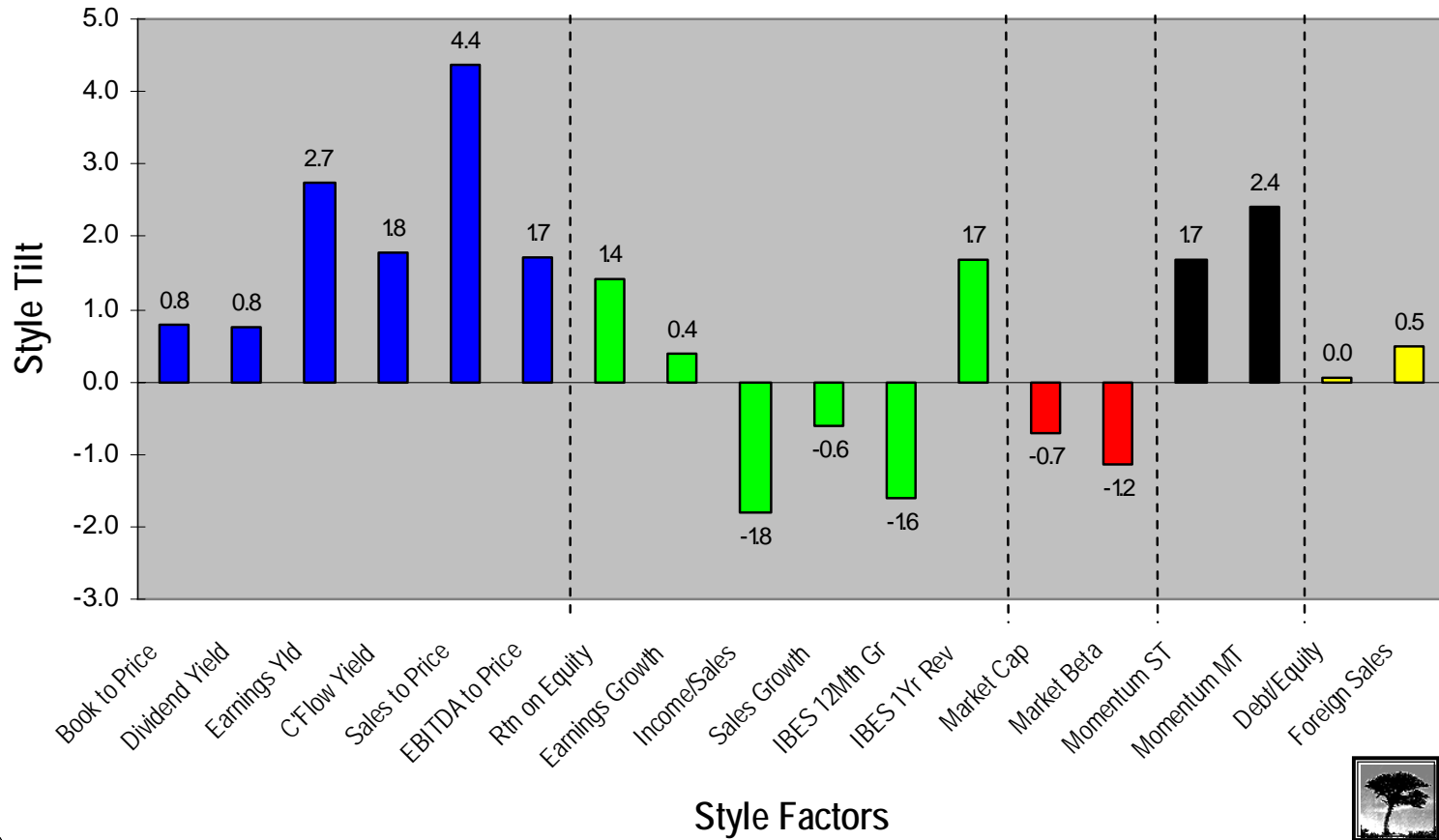
# LSV Asset Management

## Attribution Analysis

Period Ending March 31, 2005

	<b>Quarter</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>Inception 12/31/02</b>
Stock Selection	1.32	2.30	---	---	3.06
Sector Selection	1.51	1.40	---	---	0.70
Other	0.00	1.10	---	---	0.70
Fees	-0.07	-0.30	---	---	-0.30
Excess Return	2.76	4.50	---	---	4.16

## LSV vs S&P Value - Portfolio Style Skyline



# LSV Asset Management

## Organizational Issues

- No organization concerns at this time.

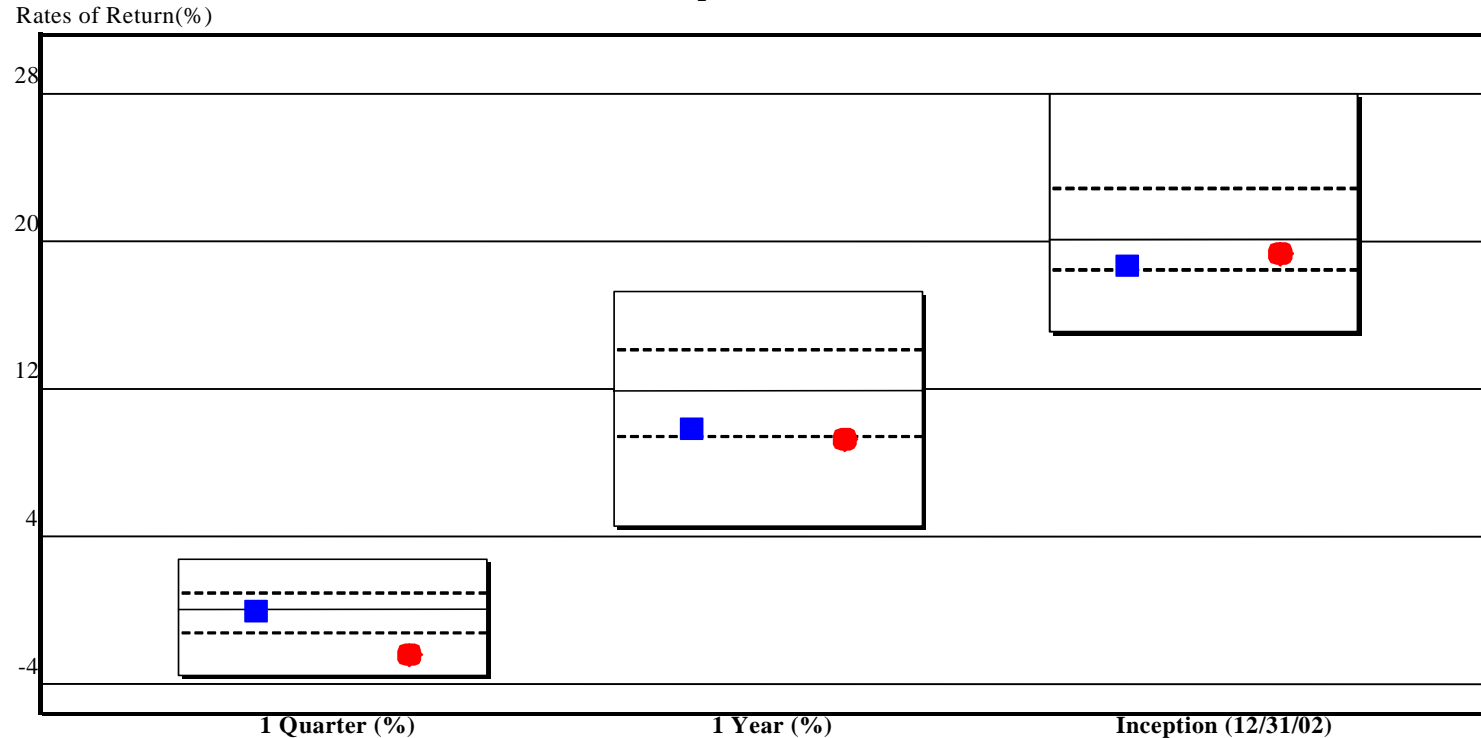
# LSV Asset Management Assessment

- LSV outperformed its benchmark and the universe median for all periods evaluated.
- Mercer rates this product A (above average probability of outperformance).

# State Street Global Advisors

## Comparison with the Mercer US Equity Large Cap Value Universe

### Performance for periods ended March 2005

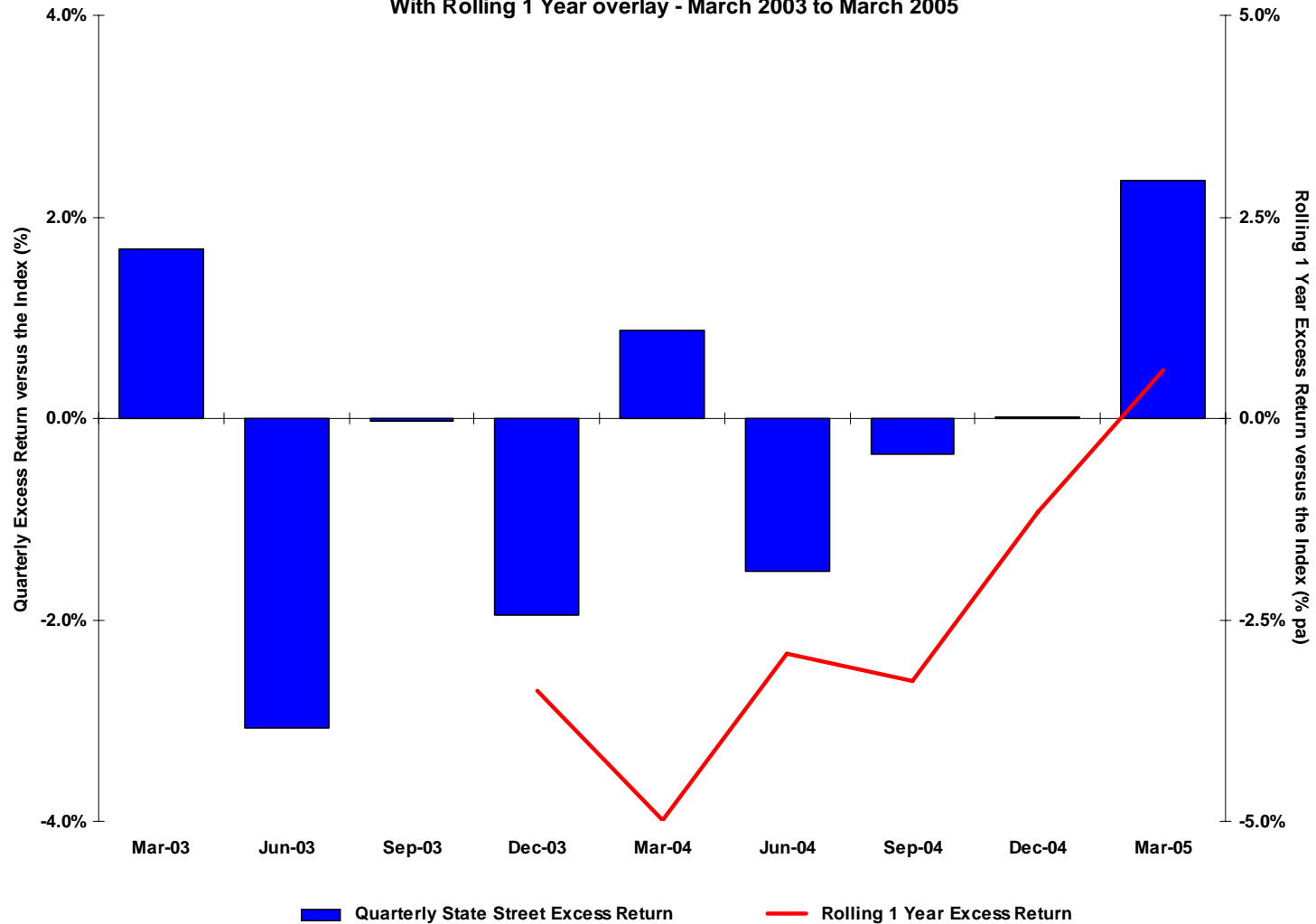


State Street	■	-0.1	(51)	9.8	(70)	18.7	(70)
S&P Val	●	-2.4		9.2		19.3	
5th Percentile		2.7		17.2		28.0	
Upper Quartile		0.8		14.0		22.8	
Median		0.0		11.8		20.0	
Lower Quartile		-1.3		9.3		18.4	
95th Percentile		-3.6		4.5		15.0	
Number of Funds		282		274		263	



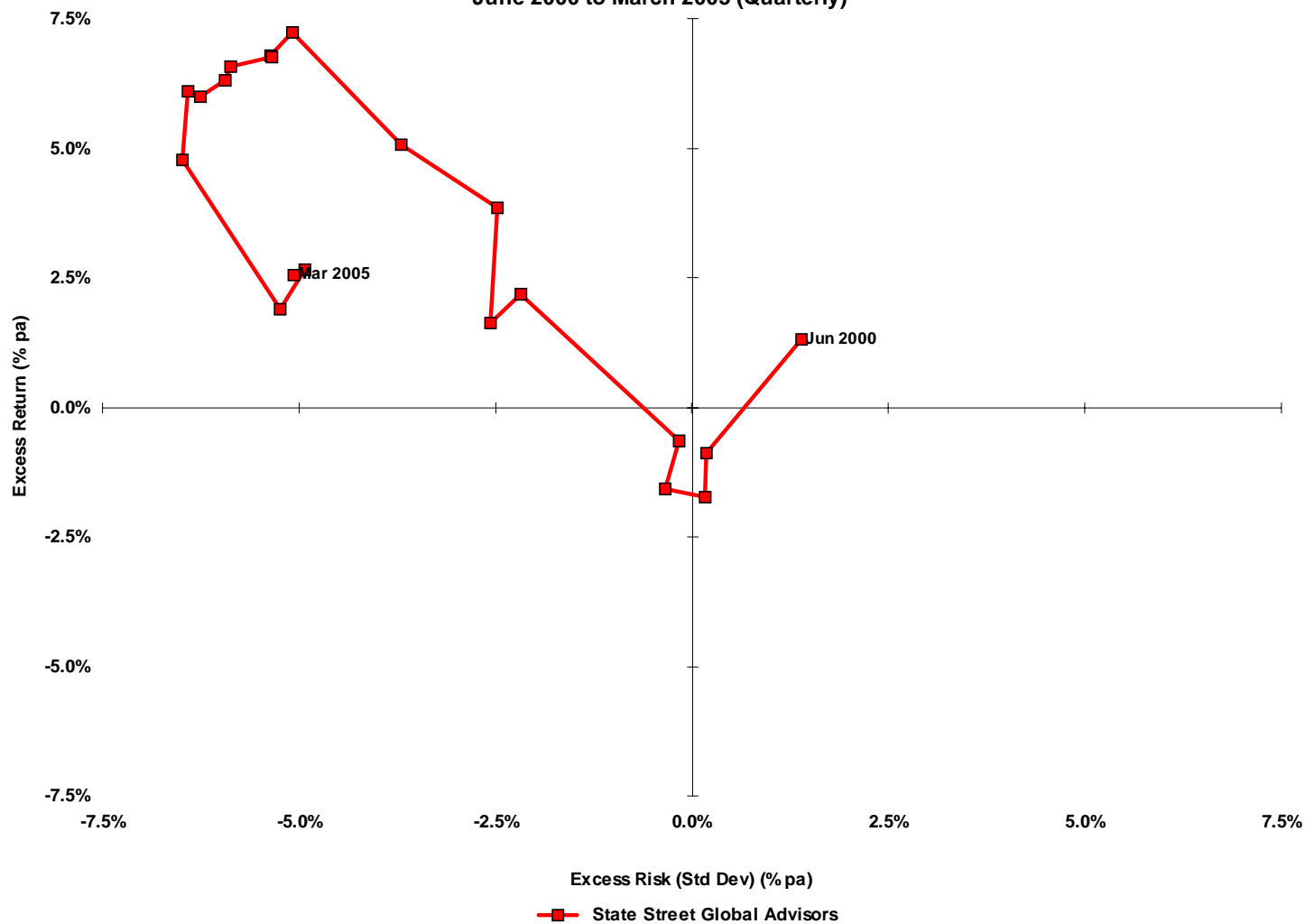
# State Street Global Advisors

Quarterly Excess Return for State Street versus the S&P 500/BARRA Value  
With Rolling 1 Year overlay - March 2003 to March 2005



# State Street Global Advisors

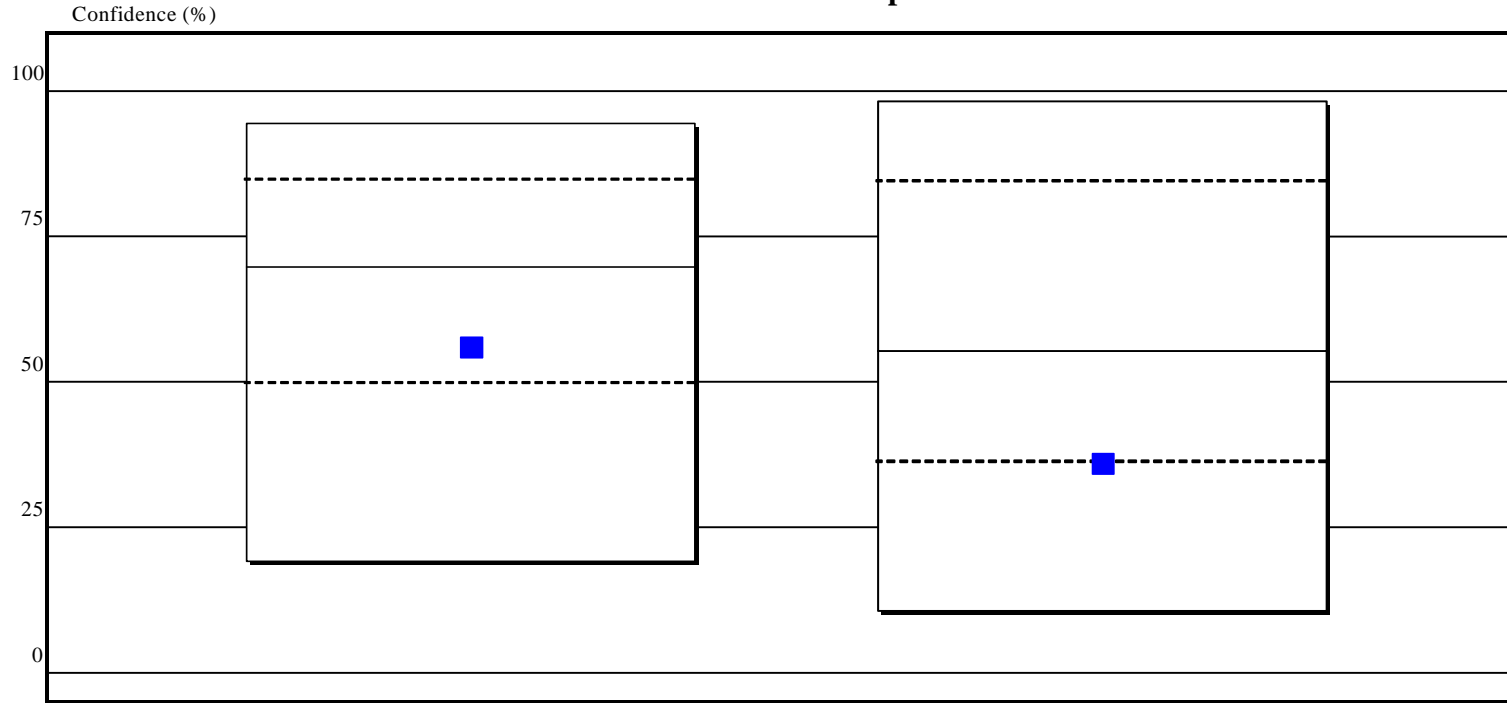
Rolling 3 Year Risk / Return versus the S&P 500/BARRA Value  
June 2000 to March 2005 (Quarterly)



# State Street Global Advisors

## Comparison with the Mercer US Equity Large Cap Value Universe

### Confidence of Value Added for periods ended March 2005



	1 Year		Inception (12/31/02)
State Street	55.7	(69)	35.8
5th Percentile	94.3		98.0
Upper Quartile	84.5		84.2
Median	69.5		55.3
Lower Quartile	49.4		35.9
95th Percentile	19.0		10.3
Number of Funds	274		263

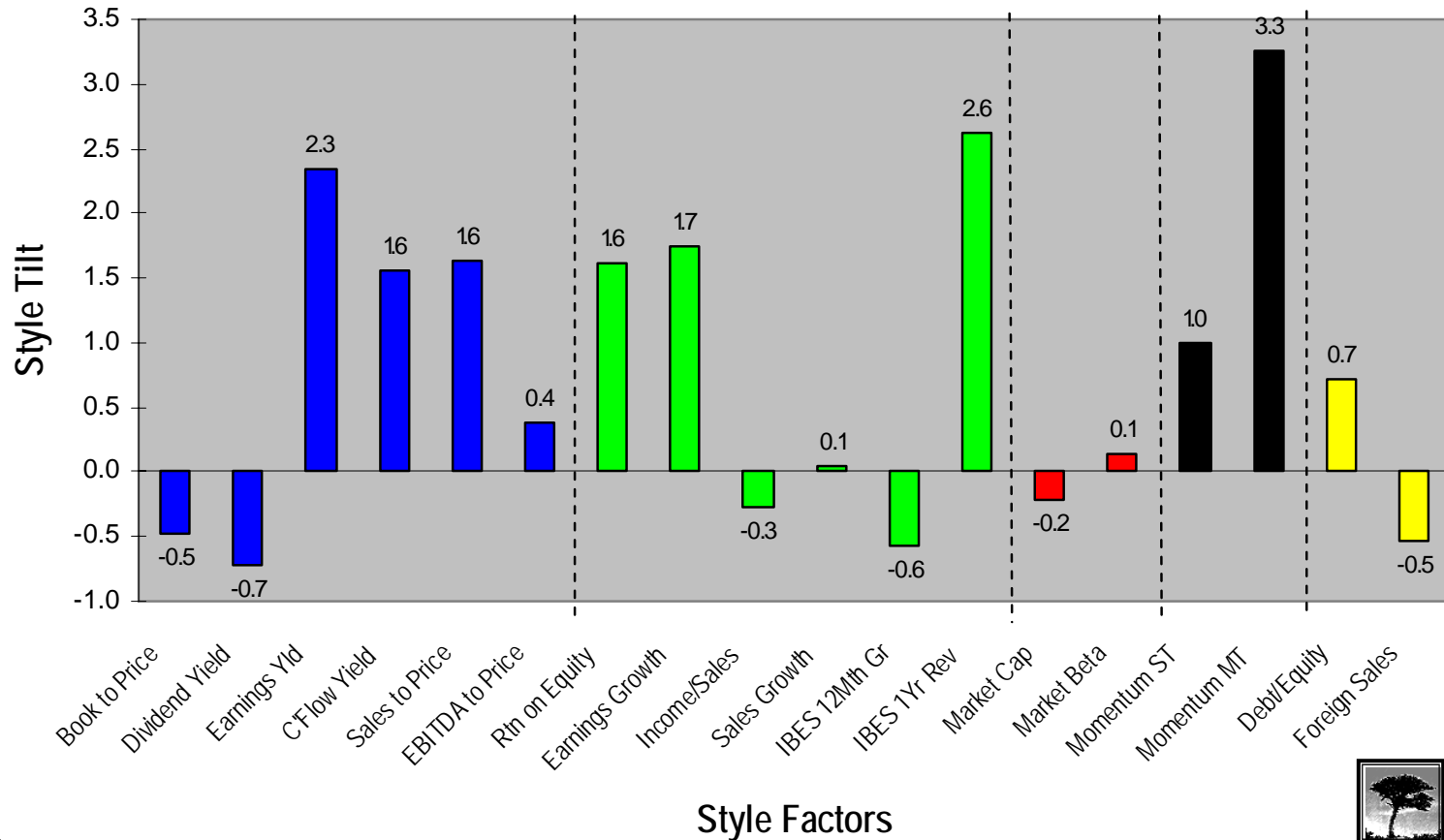
# State Street Global Advisors

## Attribution Analysis

Period Ending March 31, 2005

	<b>Quarter</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>Inception 12/31/02</b>
Stock Selection	1.57	-0.28	---	---	-7.36
Sector Selection	0.40	-0.09	---	---	-1.00
Other	0.42	1.17	---	---	7.93
Fees	-0.05	-0.21	---	---	-0.21
Excess Return	2.36	0.59	---	---	-0.64

## State Street vs S&P Value - Portfolio Style Skyline



# State Street Global Advisors

## Organizational Issues

- Alan Brown, SSgA's CIO, resigned from his post on March 18. Mercer does not anticipate Brown's resignation to significantly impact the performance or direction of the firm, given the highly structured nature of its investment offerings.
- Tony Foley, head of SSgA's Advanced Research Center (ARC) resigned on April 25. The ARC team consists of 22 individuals with plans to expand to 30 in the near future. As a result of this depth, Mercer does not expect the departures to materially impact the research produced by ARC.

# State Street Global Advisors Assessment

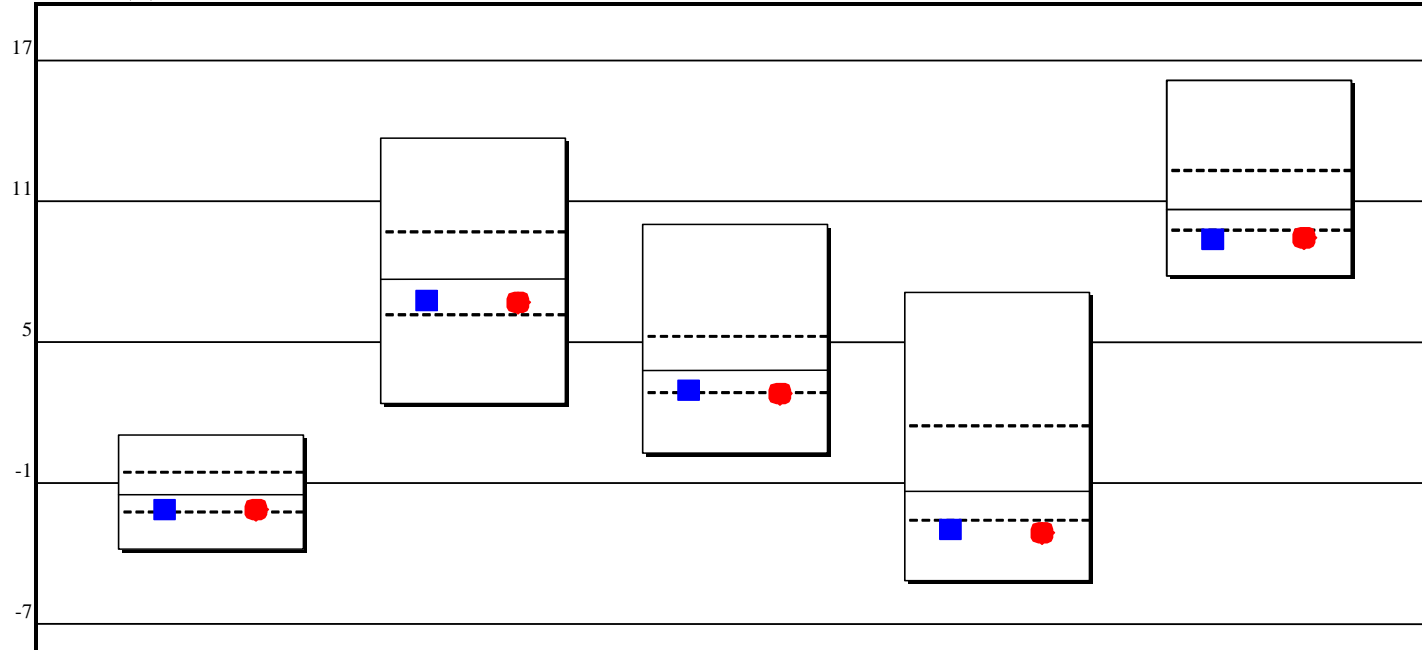
- State Street outperformed its benchmark for the recent quarter and 1 year but underperformed the benchmark since inception. For all periods evaluated, the portfolio placed below the universe median.
- Mercer rates this product A (above average probability of outperformance).

# Arizona State Retirement System E1

## Comparison with the Mercer US Equity Large Cap Core Universe

### Performance for periods ended March 2005

Rates of Return(%)

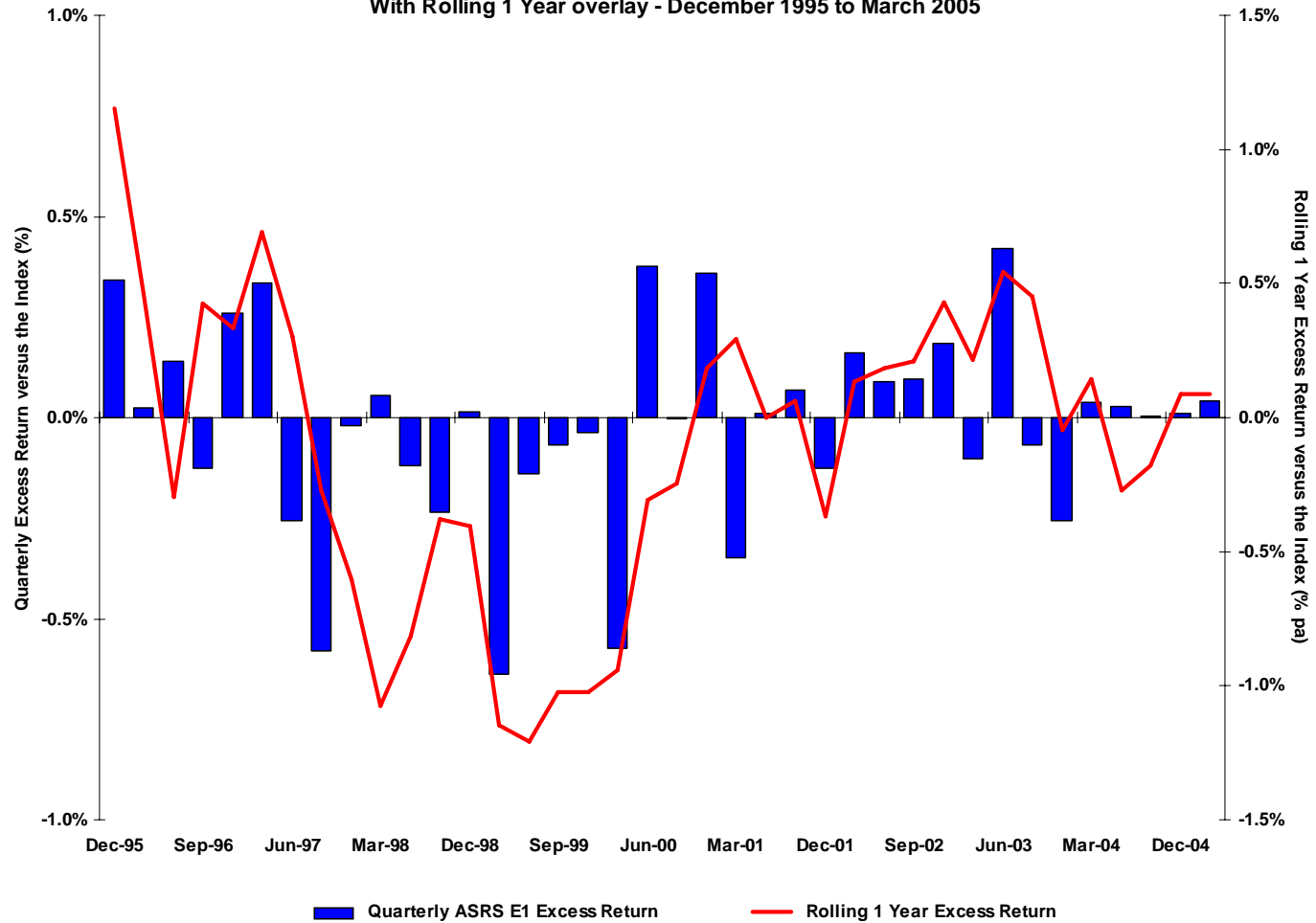


	1 Quarter (%)	1 Year (%)	3 Years (%pa)	5 Years (%pa)	Inception (9/30/95)
ASRS E1	-2.1 (70)	6.8 (64)	2.9 (72)	-3.0 (81)	9.4 (80)
S&P 500	-2.1	6.7	2.7	-3.2	9.4
5th Percentile	1.0	13.7	10.0	7.1	16.1
Upper Quartile	-0.6	9.7	5.2	1.4	12.3
Median	-1.5	7.6	3.8	-1.4	10.6
Lower Quartile	-2.3	6.1	2.8	-2.7	9.7
95th Percentile	-3.9	2.3	0.2	-5.2	7.8
Number of Funds	247	236	218	192	133



# Arizona State Retirement System E1

Quarterly Excess Return for ASRS E1 versus the S&P 500  
With Rolling 1 Year overlay - December 1995 to March 2005



# ASRS E1 Assessment

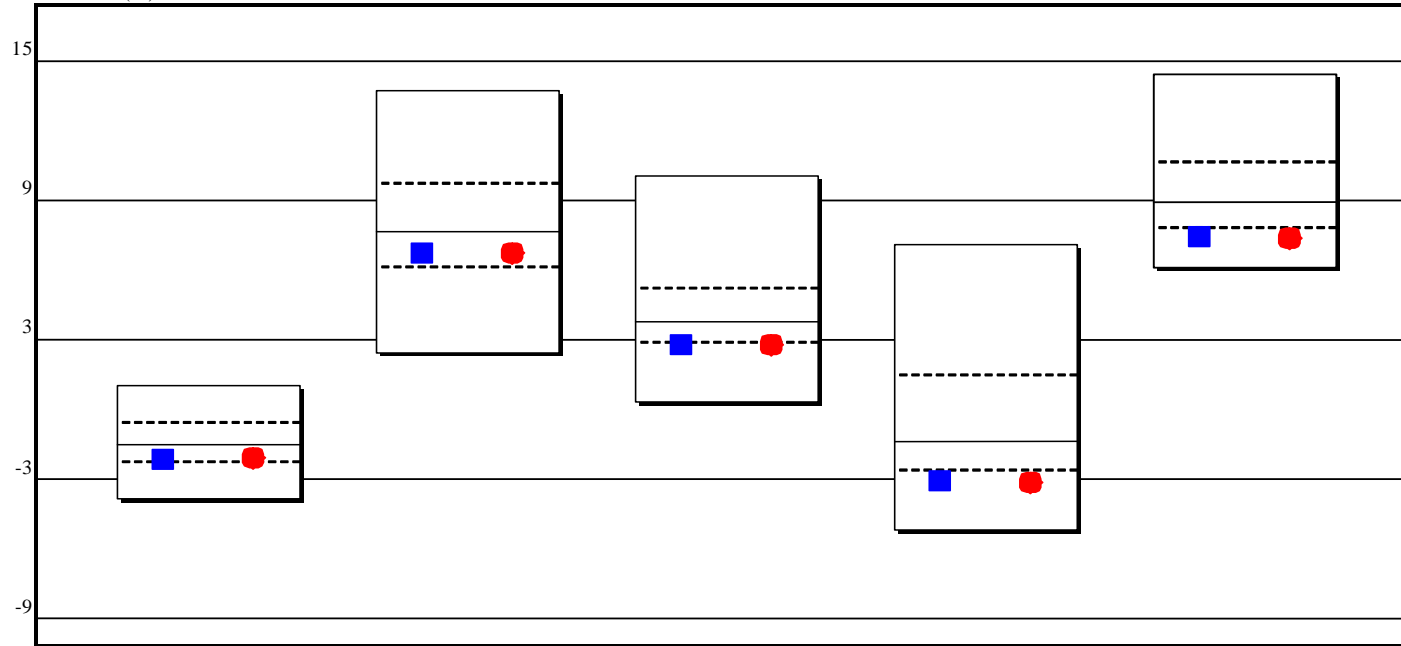
- The ASRS E1 portfolio was within 0.2% of the index for all periods evaluated.

# Arizona State Retirement System E2

## Comparison with the Mercer US Equity Large Cap Core Universe

### Performance for periods ended March 2005

Rates of Return(%)



**1 Quarter (%)**

**1 Year (%)**

**3 Years (%pa)**

**5 Years (%pa)**

**Inception (3/31/97)**

ASRS E2 ■  
S&P 500 ●

-2.1 (70)  
-2.1

6.7 (65)  
6.7

2.8 (75)  
2.7

-3.1 (82)  
-3.2

7.4 (83)  
7.3

5th Percentile

1.0

13.7

10.0

7.1

14.4

Upper Quartile

-0.6

9.7

5.2

1.4

10.6

Median

-1.5

7.6

3.8

-1.4

8.9

Lower Quartile

-2.3

6.1

2.8

-2.7

7.7

95th Percentile

-3.9

2.3

0.2

-5.2

6.1

Number of Funds

247

236

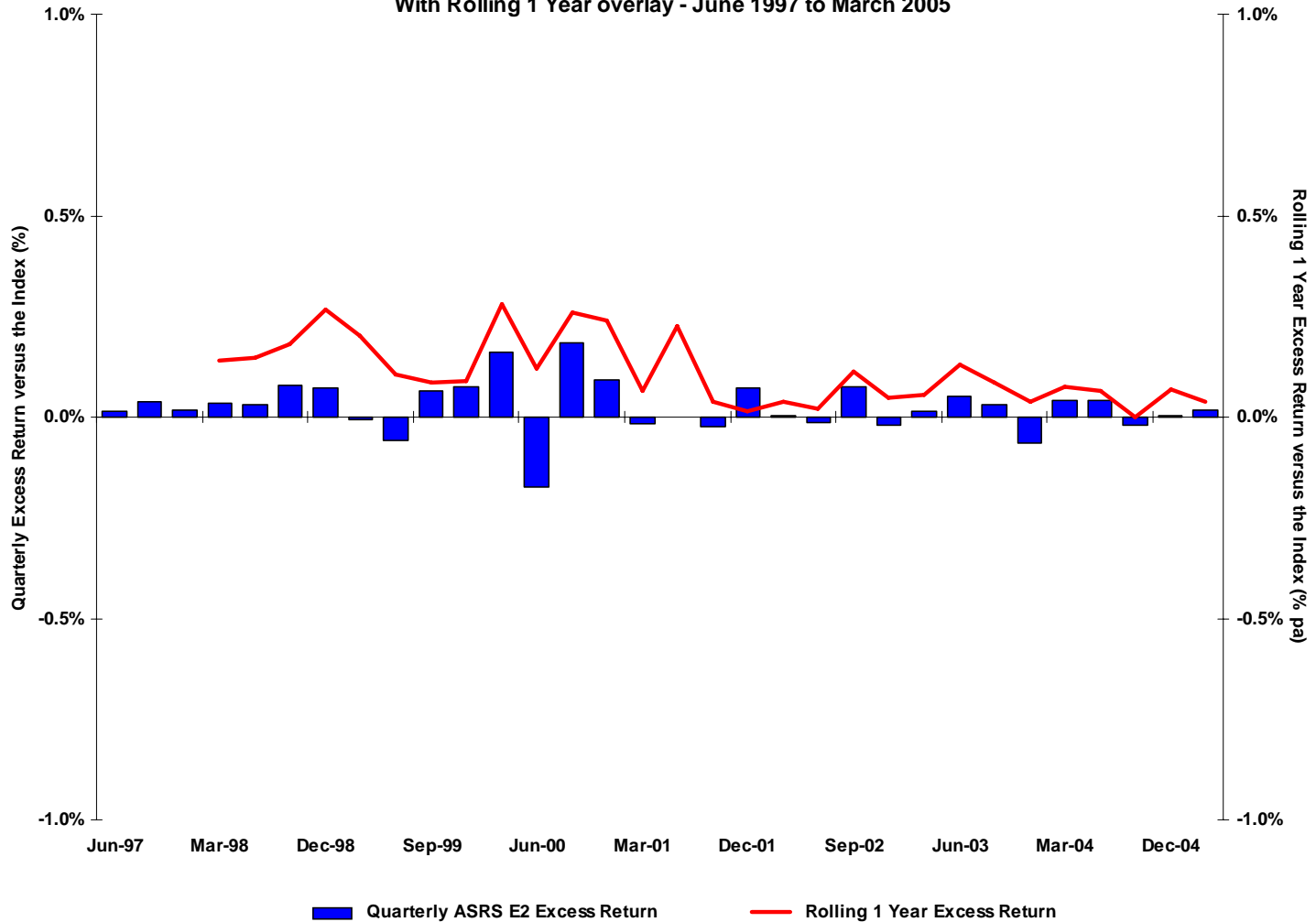
218

192

155

# Arizona State Retirement System E2

Quarterly Excess Return for ASRS E2 versus the S&P 500  
With Rolling 1 Year overlay - June 1997 to March 2005



# ASRS E2 Assessment

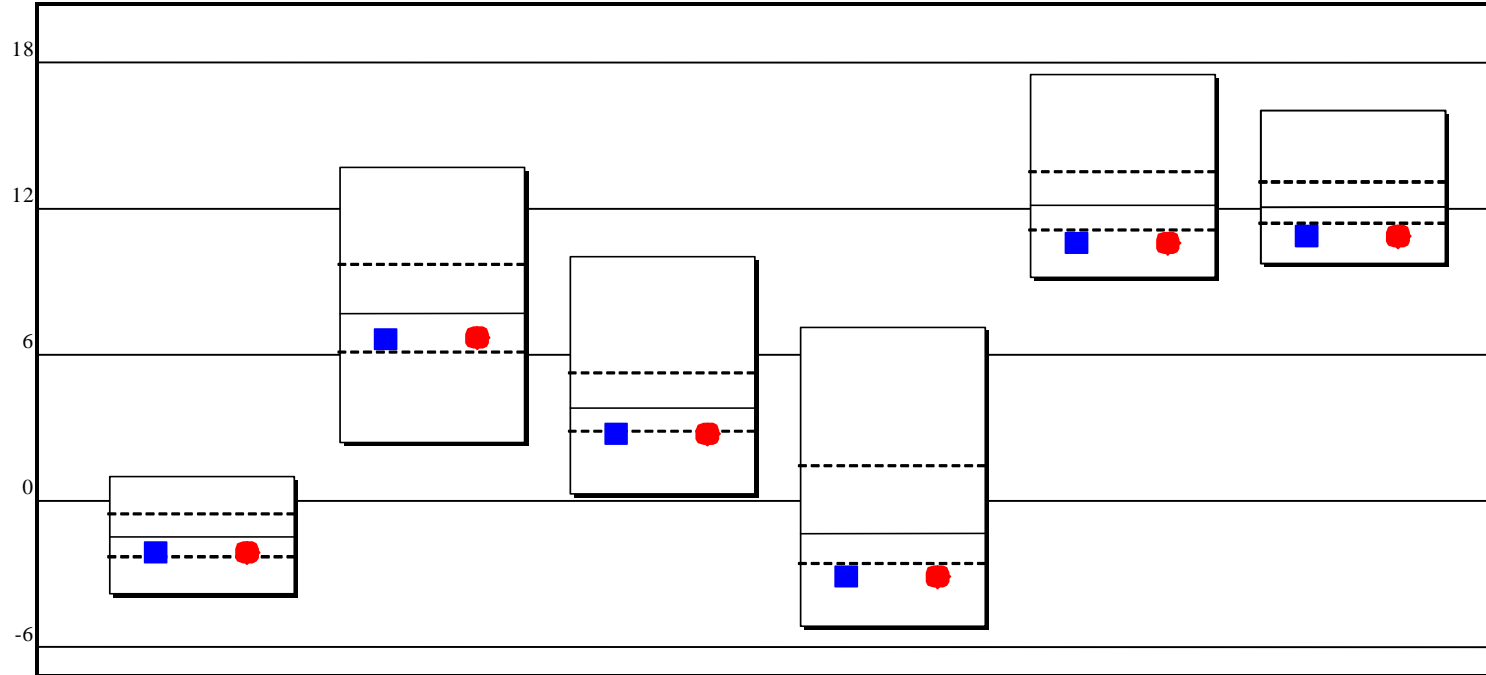
- The ASRS E2 portfolio was within 0.1% of the index for all periods evaluated.

# BGI Core Equity

## Comparison with the Mercer US Equity Large Cap Core Universe

### Performance for periods ended March 2005

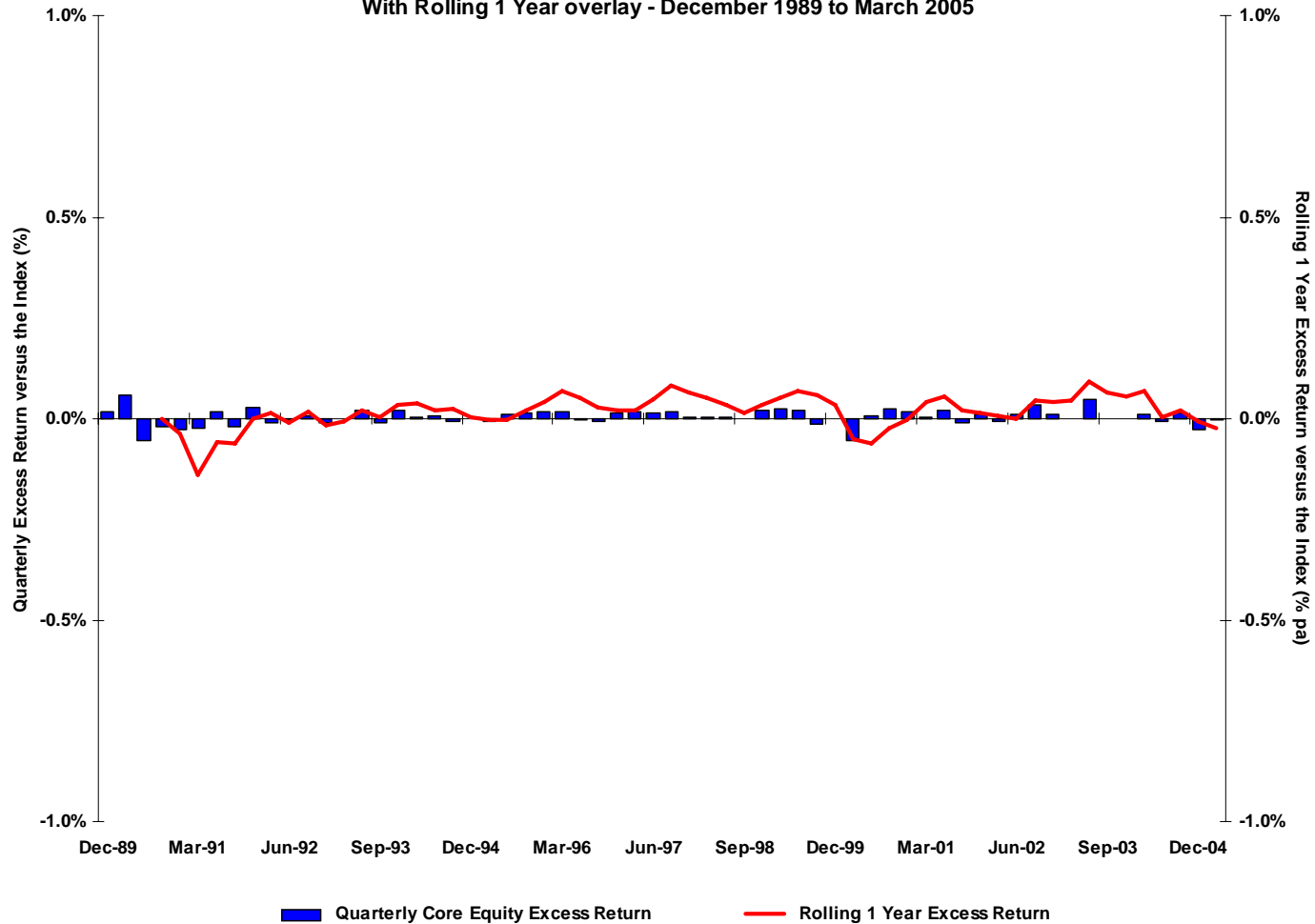
Rates of Return(%)



	1 Quarter (%)	1 Year (%)	3 Years (%pa)	5 Years (%pa)	10 Years (%pa)	15 Years (%pa)
Core Equity	-2.2 (71)	6.6 (66)	2.8 (75)	-3.1 (82)	10.6 (83)	10.8 (82)
BGIBmk	-2.1	6.7	2.7	-3.2	10.5	10.8
5th Percentile	1.0	13.7	10.0	7.1	17.5	16.0
Upper Quartile	-0.6	9.7	5.2	1.4	13.4	13.0
Median	-1.5	7.6	3.8	-1.4	12.1	12.0
Lower Quartile	-2.3	6.1	2.8	-2.7	11.0	11.3
95th Percentile	-3.9	2.3	0.2	-5.2	9.2	9.7
Number of Funds	247	236	218	192	129	59

# BGI Core Equity

Quarterly Excess Return for Core Equity versus the BGI Equity Index - Composite Benchmark  
With Rolling 1 Year overlay - December 1989 to March 2005



# Barclays Global Investors

## Organizational Issues

- No organization concerns at this time.



# Barclays Global Investors Assessment

- BGI is tracking the benchmark as expected.
- Mercer does not rate this product.

# Mercer Ratings Scale

A, A- = Above average probability of outperformance

B+, B, B- = Average probability of outperformance

C = Below average probability of outperformance

N = Not rated

## What Do the Ratings Mean?

- Mercer's view on prospective future performance relative to benchmark over the medium term (3 to 5 yrs)
- Relative to risk of underperforming benchmark
- May or may not be in keeping with past performance